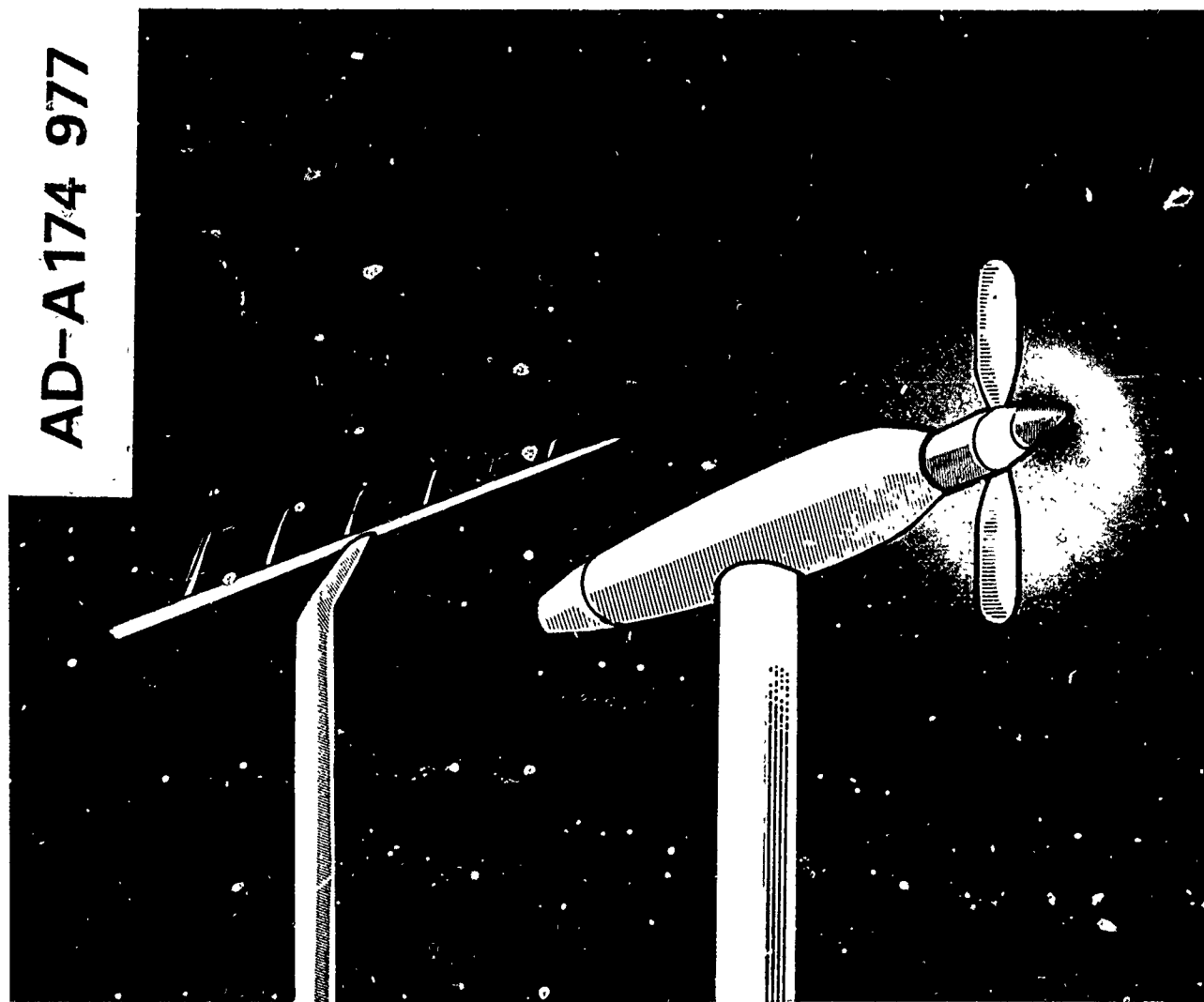


# DFVLR/FAA Propeller Noise Tests in the German-Dutch Wind Tunnel DNW

Appendix I: Basic Test-program  
(Propeller 1: Thickness 6.4%, Round Tip-shape)

DFVLR-IB 129-86/3  
FAA Report No. AEE 86-3

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Deutsche Forschungs- und  
Versuchsanstalt für  
Luft- und Raumfahrt e.V.

Inst. für Entwurfsaerodynamik  
Abteilung Technische Akustik

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by Werner M. Dobrzynski  
Hanno H. Heller  
John O. Powers  
James E. Densmore

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DATA REPORT ON PROPELLER NOISE TESTS

IN THE GERMAN-DUTCH WIND TUNNEL

APPENDIX I

RESULTS FROM THE BASIC TEST-PROGRAM  
(PROPELLER 1: THICKNESS 6.4%, ROUND TIP-SHAPE)

by

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## 1. Introduction

Within a joint effort (and supported by the German Ministry of Research and Technology/BMFT) between the Deutsche Forschungs- und Versuchsanstalt für Luft- und Raumfahrt (DFVLR), the US Federal Aviation Administration (FAA), and the German Ministry of Transportation (BMV), propeller noise tests were conducted in the "Deutsch-Niederländischer Windkanal/German Dutch Wind Tunnel (DNW)" to develop high quality propeller-acoustics data, which could be used by manufacturers for acoustic design purposes, and by researchers to validate established or newly developed theoretical noise prediction methods.

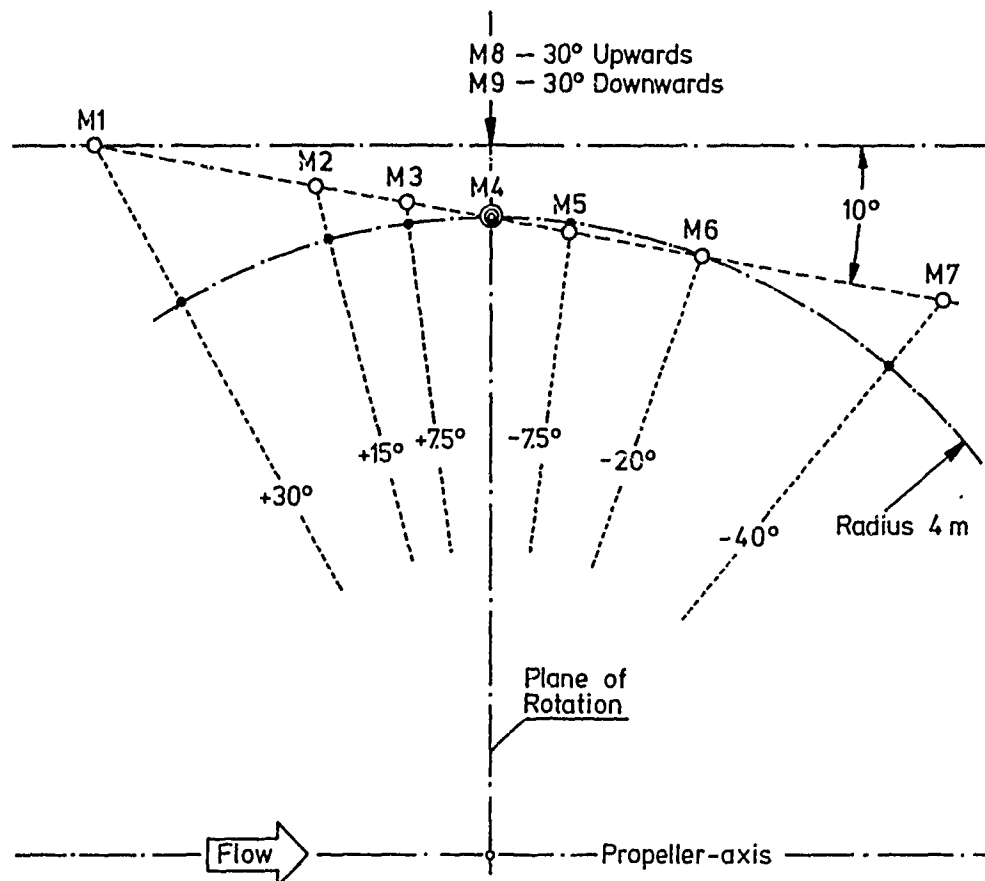
Specifically, <sup>→</sup> the program addressed propeller Mach <sup>✓</sup>number and disc <sup>✓</sup>plane attitude effects as related to noise certification test and evaluation procedures. Changes in Mach <sup>✓</sup>number, as they affect acoustic data adjustments, were explored through independent variation of tunnel flow velocity, propeller rotational speed and ambient air temperature. The tests on the effect of in <sup>✓</sup>flow angle on propeller noise also incorporated the influence of a typical engine nacelle on the flow field and, hence, on the propeller noise.

In this Appendix the results from the basic test-programm (Propeller 1: Thickness 6.4%, round tip-shape) are documented in terms of pressure <sup>✓</sup>time histories, narrow <sup>✓</sup>band spectra and unweighted as well as A <sup>✓</sup>weighted overall sound pressure levels, together with supplementary information necessary for further data interpretation. <sup>←</sup> A detailed description of data-acquisition and -reduction techniques is provided by the "Executive Report" to this Appendix.

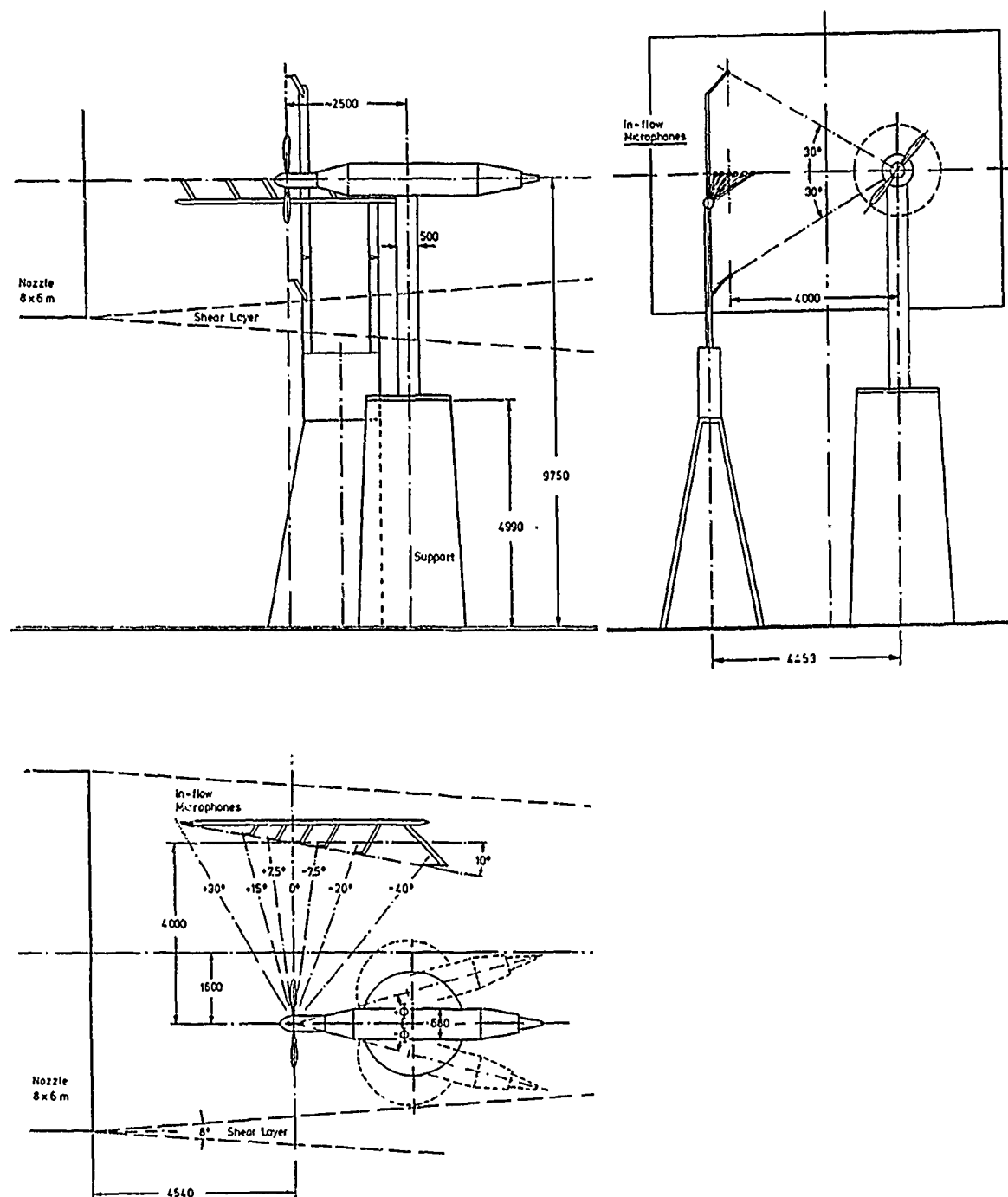


## 2. Microphone Array

A total of seven in-flow microphones were positioned in the horizontal plane at different streamwise locations corresponding to particular geometric radiation angles from the propeller center. Two additional microphones were positioned in the plane of rotation (4 m lateral distance to the propeller axis) at angles of  $\pm 30$  deg respectively above and below the horizontal plane with reference to the propeller center.



In-flow Microphone Positioning



Schematic Representation of Test-rig Arrangement within the Core-flow Regime of the DNW 8x6m<sup>2</sup> Open Test Section

### 3. Environmental and Operational Test-data

In the following table(s) the data-point matrix is documented. These table(s) summarise the as-measured data and characteristic propeller operational parameters as calculated from measured data.

RUN NO.	DATA POINT	PITCH ANGLE		ROT. SPEED	FLOW VEL.	POWER	THRUST	ATTITUDE ANGLE		FLOW TEMP.	FLOW PRES.	FLOW DENS.	ADV. RATIO	ATTACK ANGLE	POWER COEF.	THRUST COEF.	HEL. MACHN.
		DEG	RPM					M/S	KW								
63	AN-1	20.8	2100.	54.0	103.8	1554.		0.0	286.0	99188.	1.206	0.2417	2.939	0.0580	0.0617	0.6780	
64	AN-2	20.8	2400.	61.2	161.6	2123.		0.0	286.5	99300.	1.205	0.2397	3.078	0.0605	0.0646	0.7738	
65	AN-3	20.8	2700.	69.5	237.8	2702.		0.0	287.9	99410.	1.200	0.2419	2.921	0.0628	0.0652	0.8688	
67	AN-4	20.8	2400.	77.2	73.6	642.		0.0	290.3	99441.	1.189	0.3023	-1.155	0.0279	0.0198	0.7809	
66	AN-5	20.8	2700.	77.0	184.6	1907.		0.0	289.4	99480.	1.194	0.2680	1.134	0.0490	0.0463	0.8720	
68	AN-7	20.8	2189.	77.2	21.8	-78.		0.0	291.0	99438.	1.186	0.3315	-3.044	0.0109	-0.0029	0.7174	
58	BN-1	19.9	1800.	34.2	76.5	1623.		0.0	287.1	99141.	1.200	0.1786	6.507	0.0682	0.0881	0.5727	
57	BN-2	19.9	2100.	40.2	123.8	2270.		0.0	287.2	99288.	1.201	0.1799	6.410	0.0694	0.0905	0.6682	
56	BN-3	19.9	2400.	45.4	192.5	3055.		0.0	287.1	99211.	1.201	0.1778	6.564	0.0723	0.0933	0.7635	
54	BN-4	19.9	2100.	51.2	95.9	1520.		0.0	288.7	99262.	1.194	0.2292	2.910	0.0541	0.0609	0.6729	
53	BN-5	19.9	2400.	51.5	171.9	2599.		0.0	289.3	99090.	1.190	0.2017	4.848	0.0652	0.0801	0.7639	
51	BN-6	19.9	2700.	77.2	152.1	1500.		0.0	287.0	98625.	1.194	0.2687	0.186	0.0404	0.0364	0.8758	
52	BN-61	19.9	2800.	76.8	192.1	1942.		0.0	289.0	98954.	1.189	0.2578	0.930	0.0459	0.0440	0.9027	
55	BN-7	19.9	1465.	51.5	3.4	-98.		0.0	287.3	99273.	1.201	0.3304	-3.875	0.0056	-0.0080	0.4831	
104	CN-1	23.7	1800.	38.3	103.5	1981.		0.0	287.5	100074.	1.210	0.2000	8.769	0.0915	0.1067	0.5745	
103	CN-2	23.7	2100.	45.1	170.7	2756.		0.0	287.5	100055.	1.210	0.2019	8.636	0.0950	0.1091	0.6705	
101	CN-3	23.7	1800.	51.5	80.1	1255.		0.0	287.1	100082.	1.212	0.2689	3.975	0.0707	0.0675	0.5838	
100	CN-4	23.7	2100.	51.2	157.0	2359.		0.0	286.6	100069.	1.214	0.2292	6.710	0.0871	0.0930	0.6754	
99	CN-7	23.7	2250.	51.2	207.8	3011.		0.0	287.3	100070.	1.211	0.2139	7.783	0.0939	0.1037	0.7204	
98	CN-5	23.7	2400.	67.3	208.9	2525.		0.0	287.0	100125.	1.213	0.2636	4.338	0.0777	0.0763	0.7775	
102	CN-6	23.7	1294.	51.0	6.0	5.		0.0	287.2	100110.	1.212	0.3704	-2.585	0.0142	0.0005	0.4321	
97	DN-1	29.0	1800.	43.9	154.4	2422.		0.0	287.0	100090.	1.212	0.2292	12.005	0.1362	0.1302	0.5785	
93	DN-2	29.0	1800.	51.3	142.3	2123.		0.0	285.6	100088.	1.219	0.2679	9.345	0.1248	0.1135	0.5852	
92	DN-5	29.0	1950.	51.1	193.6	2756.		0.0	285.4	100080.	1.219	0.2463	10.820	0.1335	0.1255	0.6309	
91	DN-3	29.0	2100.	67.4	210.7	2491.		0.0	286.0	100084.	1.217	0.3017	7.089	0.1166	0.0980	0.6883	
96	DN-4	29.0	1069.	51.3	5.1	20.		0.0	286.8	100109.	1.214	0.4510	-2.022	0.0215	0.0030	0.3675	

#### 4. Overall Noise Levels from Direct Analog Analysis

The following tables provide unweighted (OASPL) and A-weighted ( $L_A$ ) overall sound pressure levels from quick-look, analog data-analysis of measured data for all data-points and microphone positions respectively. Level-numbers which are identified with an asterix are "disturbed data" and should not be interpreted.

BASIC PROGRAM, ROUND-TIP PROP. (1)

DNW PROPELLER NOISE TEST

Run No.	Data Point		In-Flow Noise Level								
			M1	M2	M3	M4	M5	M6	M7	M8	M9
63	AN-1	L <sub>A</sub> -dB(A)	91.0	94.8	95.7	97.0	97.7	--	99.7*	104.6*	98.9
		OASPL-dB	104.2	109.8*	109.7	111.0	112.8	--	112.2*	116.4*	112.4
64	AN-2	L <sub>A</sub> -dB(A)	99.5	104.2	106.5	107.3	108.1	--	103.7*	107.4	106.4
		OASPL-dB	110.5	114.6	115.2	116.8	118.3	--	114.7*	118.6	117.3
65	AN-3	L <sub>A</sub> -dB(A)	110.0*	118.3	119.5	120.4	119.6	--	116.2*	119.0	119.4
		OASPL-dB	117.7	124.9*	123.4	124.7	124.9	--	129.1*	124.1	124.8
67	AN-4	L <sub>A</sub> -dB(A)	107.3*	107.4*	106.4	107.0	107.6	--	124.9*	108.3*	107.1
		OASPL-dB	116.6*	121.0*	116.7	118.2*	118.4	--	138.0*	126.1	124.8*
66	AN-5	L <sub>A</sub> -dB(A)	111.5*	119.1*	119.2	119.8	118.7	--	123.5*	118.3	118.6
		OASPL-dB	120.1*	127.9*	123.2	124.7	124.2	--	137.3*	126.0*	126.5*
68**	AN-7	L <sub>A</sub> -dB(A)	105.3*	104.5*	101.3	104.4*	105.1	--	124.8*	106.4*	104.5
		OASPL-dB	114.3*	121.0*	115.8	118.2*	117.3	--	137.6*	126.2	124.9*
58	BN-1	L <sub>A</sub> -dB(A)	84.1	85.0	86.1	86.9	87.8	--	86.7	84.2	88.1
		OASPL-dB	99.7	102.4	104.1	105.2	106.6	--	105.9	104.4	107.4
57	BN-2	L <sub>A</sub> -dB(A)	89.0	93.9	96.0	96.9	97.2	--	93.1	94.2	97.8
		OASPL-dB	104.5	108.7	110.1	111.5	113.0	--	112.3	108.7	112.0
56	BN-3	L <sub>A</sub> -dB(A)	97.9	104.3	107.0	107.7	108.8	--	101.0	105.7	107.2
		OASPL-dB	110.1	114.0	115.8	117.2	119.2	--	117.6	115.2	116.9
54	BN-4	L <sub>A</sub> -dB(A)	90.2	93.5	94.8	96.0	96.5	--	97.9*	101.0*	97.2
		OASPL-dB	103.6	109.3*	109.2	110.1	111.8	--	111.9*	115.2	111.3
53	BN-5	L <sub>A</sub> -dB	97.3	103.4	106.3	106.5	107.8	--	101.9*	106.4*	106.1
		OASPL-dB	108.6	113.9*	115.4	116.6	118.6	--	117.1*	117.4	116.6
51	BN-6	L <sub>A</sub> -dB(A)	111.1*	119.3*	119.3	119.4	118.4	--	114.5*	117.4	118.9
		OASPL-dB	120.1*	127.6*	123.3	123.9	123.5	--	138.0*	125.2*	126.6
52	BN-61	L <sub>A</sub> -dB(A)	112.8*	123.1*	124.7	124.7	123.2	--	126.1*	122.3	123.8
		OASPL-dB	120.1*	130.6*	127.0	127.5	126.8	--	139.4*	126.4	128.3
55**	BN-7	L <sub>A</sub> -dB(A)	87.9	88.7	88.7	89.6	92.0	--	94.2*	99.6*	95.1
		OASPL-dB	97.1	105.9*	99.4	100.6	105.3	--	106.7*	114.0*	108.7*

\*Higher "R" values

\*\*Windmilling

Linear- and A-weighted Overall Noise Levels from Analog Data Analysis

BASIC PROGRAM, ROUND-TIP PROP. (2)

DNW PROPELLER NOISE TEST

Run No.	Data Point		In-Flow Noise Level								
			M1	M2	M3	M4	M5	M6	M7	M8	M9
104	CN-1	L <sub>A</sub> -dB(A)	87.1	88.8	89.9	90.6	90.8	89.8	88.7	88.4	91.2
		OASPL-dB	103.1	106.2*	107.0	108.6	109.4	108.0	105.4	108.5	108.8
103	CN-2	L <sub>A</sub> -dB(A)	91.8	96.5	98.9	100.2	100.4	98.8	95.0	98.4	98.8
		OASPL-dB	105.6	111.6	113.3	115.1	116.1	115.5	112.3	113.0	112.8
101	CN-3	L <sub>A</sub> -dB(A)	88.9	91.1*	91.6	91.2	92.6	91.5	92.2*	100.0*	94.7
		OASPL-dB	102.1	110.3*	105.7	107.4	109.0	107.5	105.5*	114.5*	110.6
100	CN-4	L <sub>A</sub> -dB(A)	91.7	96.3	97.8	99.1	99.5	98.1	95.1	101.3*	98.9
		OASPL-dB	106.4	111.6*	112.0	113.6	114.9	114.6	113.0	115.9*	113.2
99	CN-7	L <sub>A</sub> -dB(A)	95.4	100.8	103.4	104.8	105.4	103.3	99.7*	105.5	103.6
		OASPL-dB	109.6	115.5	116.4	117.5	118.2	117.0	115.7*	119.2*	116.2
98	CN-5	L <sub>A</sub> -dB(A)	102.1*	105.6	107.9	109.1	109.8	106.7	98.7*	109.4	108.0
		OASPL-dB	112.4	117.1*	116.7	119.0*	120.5	119.8	111.1*	120.9	120.3
102**	CN-6	L <sub>A</sub> -dB(A)	88.2	89.0*	90.4	89.1	91.2	89.8*	91.1*	102.0*	93.8
		OASPL-dB	97.5	106.1*	98.4	100.6*	104.6	102.7*	100.6	113.1*	107.8
97	DN-1	L <sub>A</sub> -dB(A)	93.8	94.7	95.6	96.2	96.4	95.5	94.8	94.2	97.0
		OASPL-dB	105.1	109.7*	109.8	111.6	112.9	112.3	109.9	111.7	113.3
93	DN-2	L <sub>A</sub> -dB(A)	91.3	93.3	93.9	94.6	95.6	94.6	96.0*	99.7*	97.0
		OASPL-dB	105.6	110.2*	110.4	112.2	113.5	112.2	109.3*	115.3	113.1
92	DN-5	L <sub>A</sub> -dB(A)	94.4	97.0	98.3	98.7	99.4	98.8	99.1	100.2*	99.7
		OASPL-dB	105.8	111.7*	112.6	114.9	116.5	116.4	112.2	116.5*	115.7
91	DN-3	L <sub>A</sub> -dB(A)	97.2*	101.3	101.2	103.2	104.6	101.9	109.6*	106.3*	103.8
		OASPL-dB	110.2*	116.7*	115.7	117.7	119.0	117.7	125.0*	120.4*	119.2
96**	DN-4	L <sub>A</sub> -dB(A)	88.0	89.9*	90.4	88.7	91.2	90.2	91.2*	98.8	93.8
		OASPL-dB	97.4	110.7*	98.6*	100.8*	105.0	103.0	101.3*	112.9	108.2*

\*Higher "R" values

\*\*Windmilling

Linear- and A-weighted Overall Noise Levels from Analog Data-analysis

## 5. Acoustic Pressure-time Histories and Narrow-band Spectra

Acoustic data as presented in this section have been derived from a computer analysis of digitized analog tape-readings. For each data-point and microphone position respectively the data were processed and are presented in two different ways:

- a) A single instantaneous pressure-time history is presented and labeled "Instantaneous Time History" together with a power spectrum which had been calculated as an energy average of individual power spectra corresponding to a certain number of instantaneous pressure-time histories. This spectrum is labeled "Average (xx) Power Spectrum". The "xx" in the label denotes the number of time histories averaged in that particular spectrum.
- b) A certain number of instantaneous pressure-time histories is averaged in the time-domain and the resulting pressure averaged time-history is labeled "Average (xx) Time History". The "xx" in the label denotes the number of averaged instantaneous time-histories.

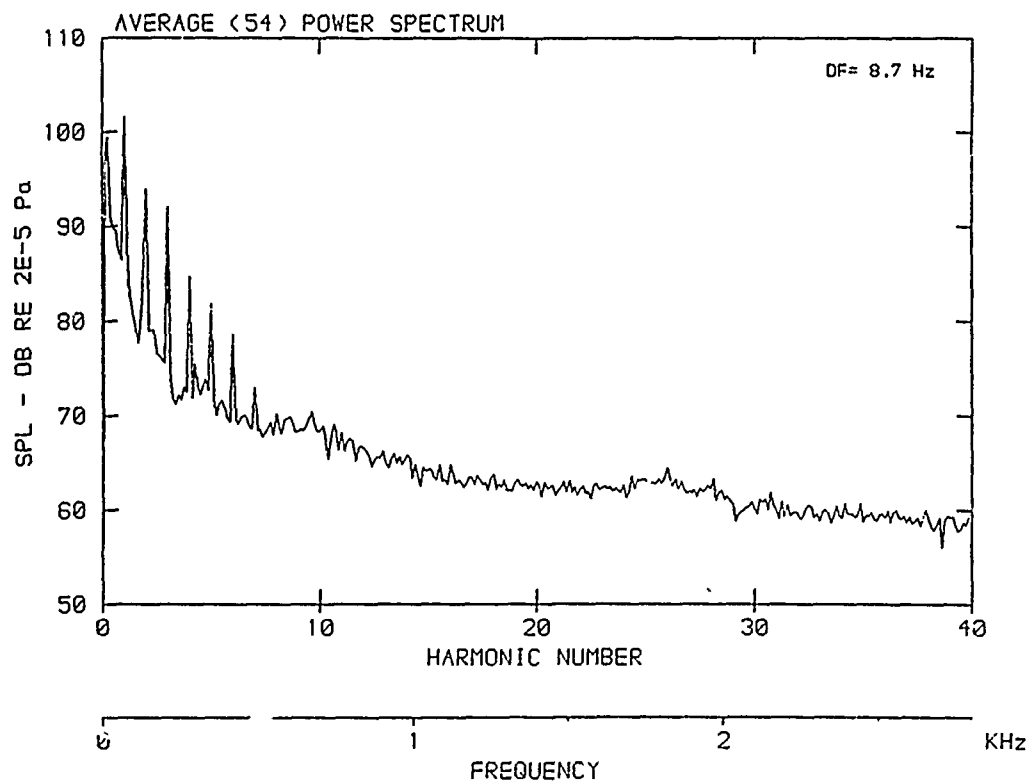
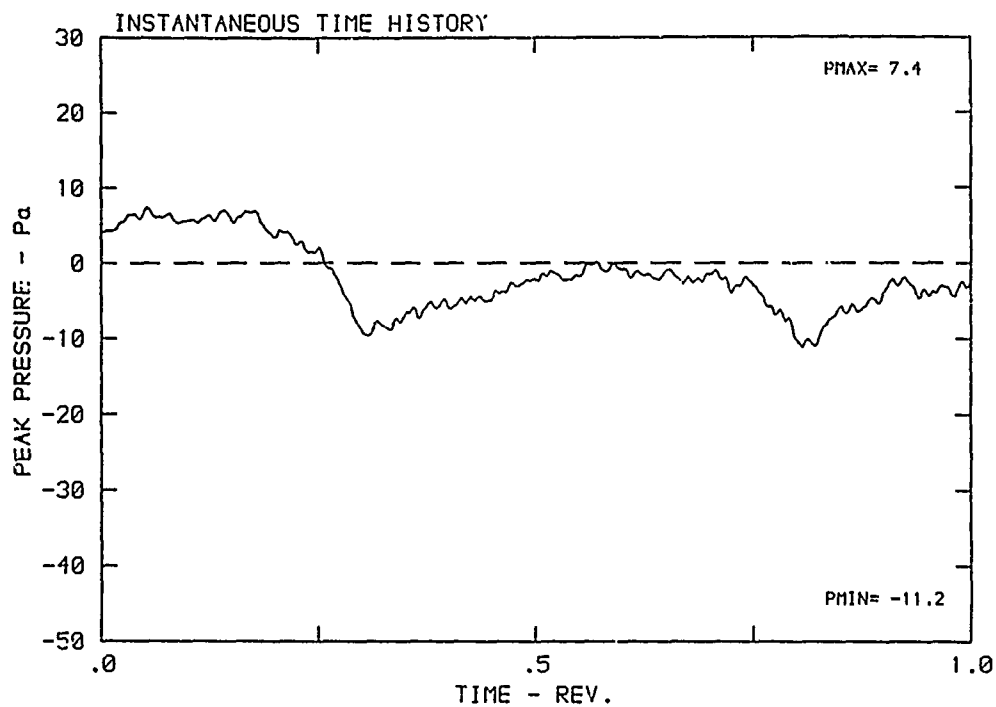
The value of  $\Delta P$  in the brackets behind this label denotes the maximum peak-to-peak pressure amplitude difference in %, when referenced to the minimum peak-to-peak pressure amplitude difference as detected in the "xx" instantaneous time histories. The magnitude of  $\Delta P$  can be taken as indicator to judge the stationarity (quality) of the respective data-record. If the value of  $\Delta P$  is in excess of 496% respective data are marked with a triple star (\*\*\*) to indicate that the data are heavily distorted.

From the pressure-averaged time-history a pressure level spectrum is calculated and labeled "Power Spectrum of Averaged Time History".



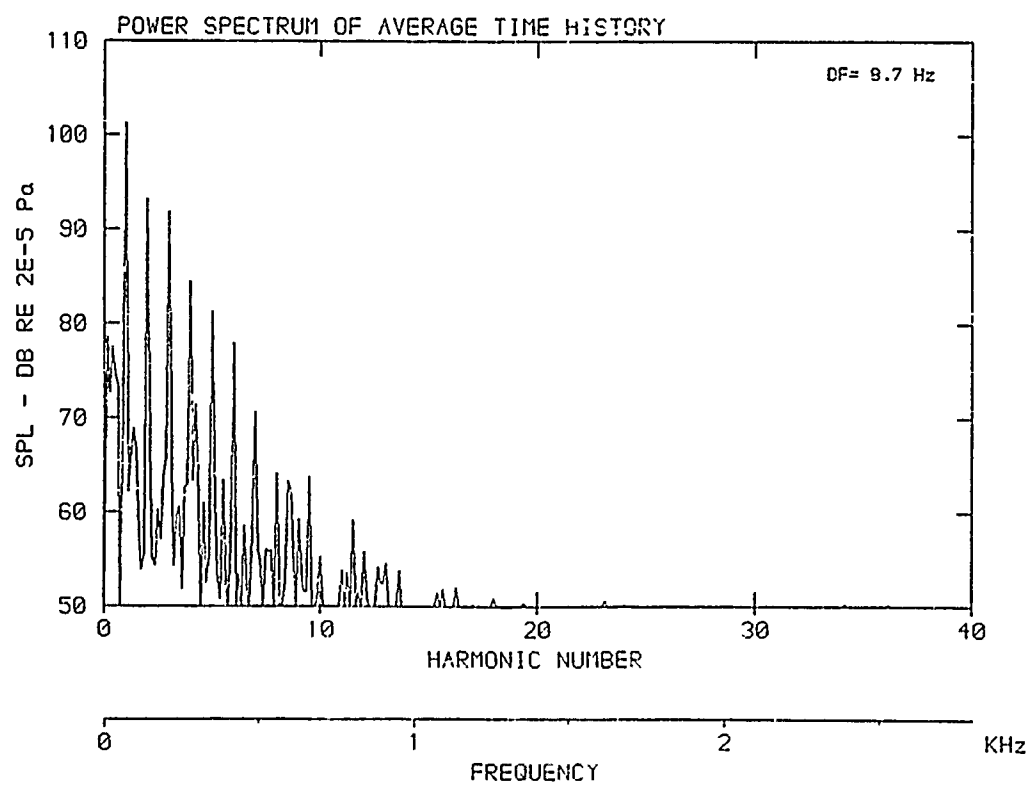
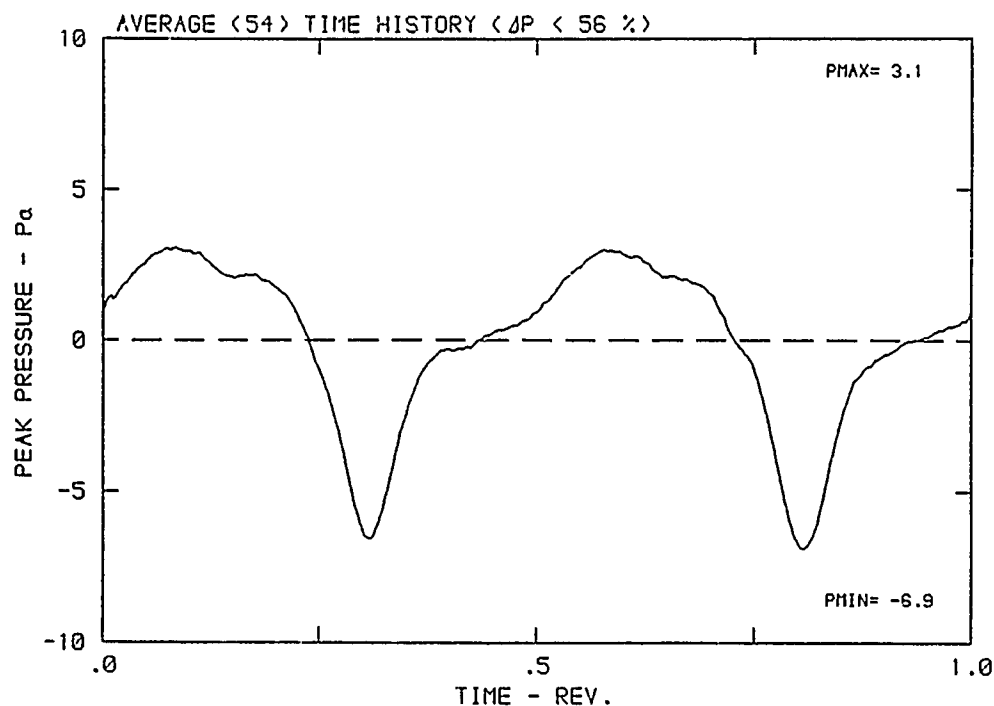
DATA POINT: AN-1 RUN: 63 MP: 1

$\beta$ : 20.8° MH: .6779 n: 2100 rpm v/u: .242  $\phi$ : .0° T: 286.0 K



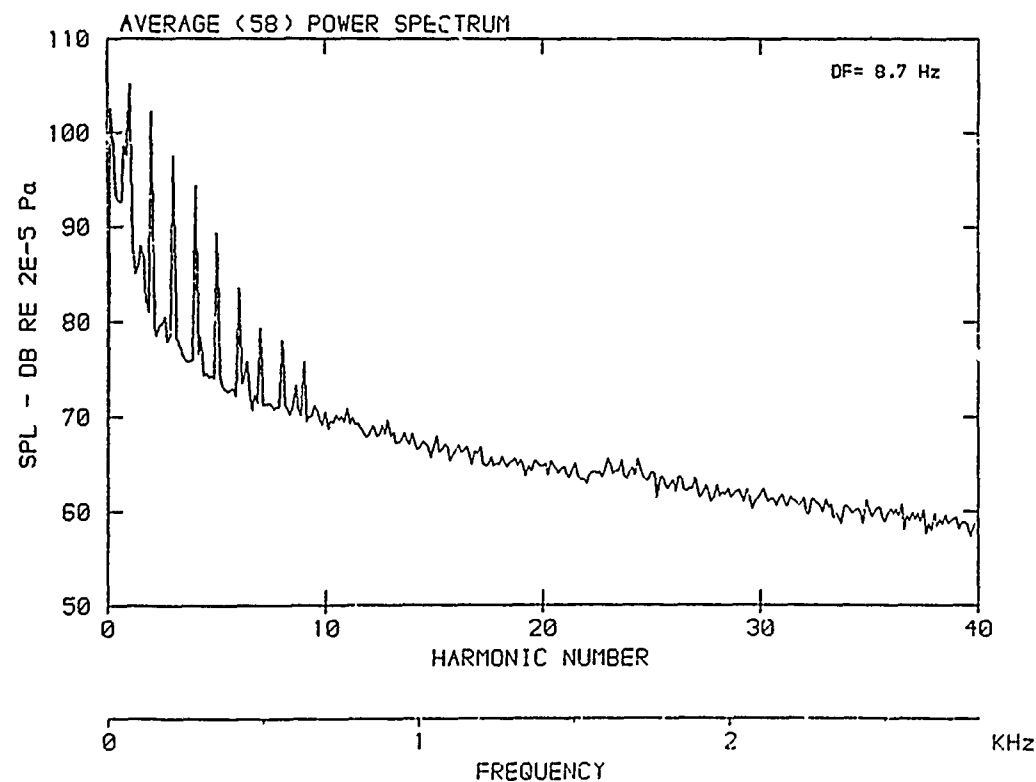
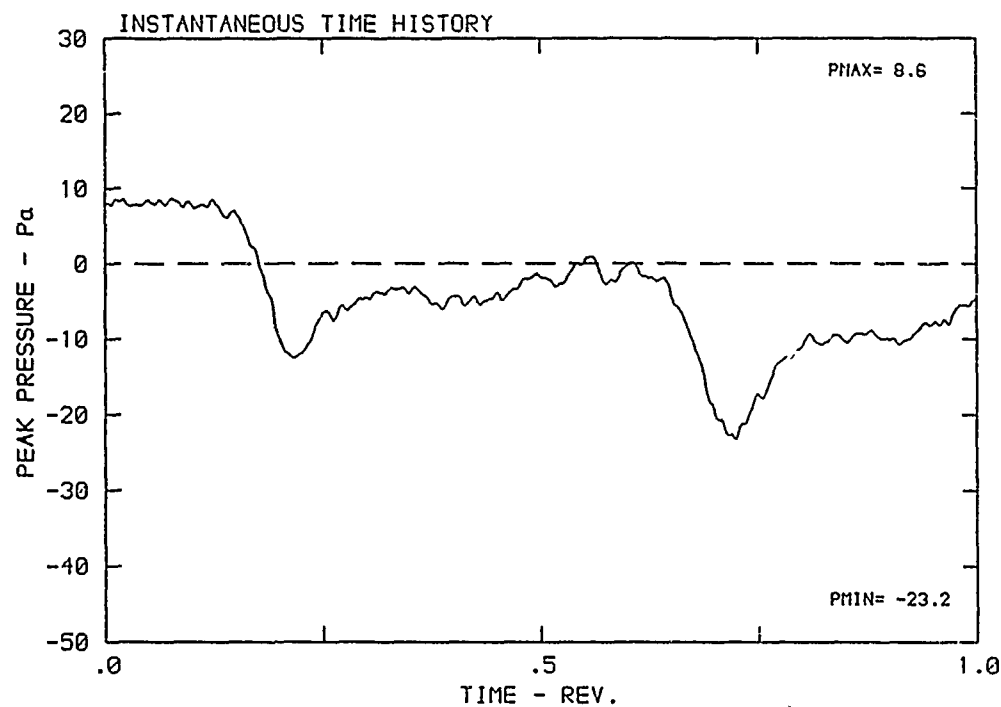
DATA POINT: AN-1      RUN: 63      MP: 1

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



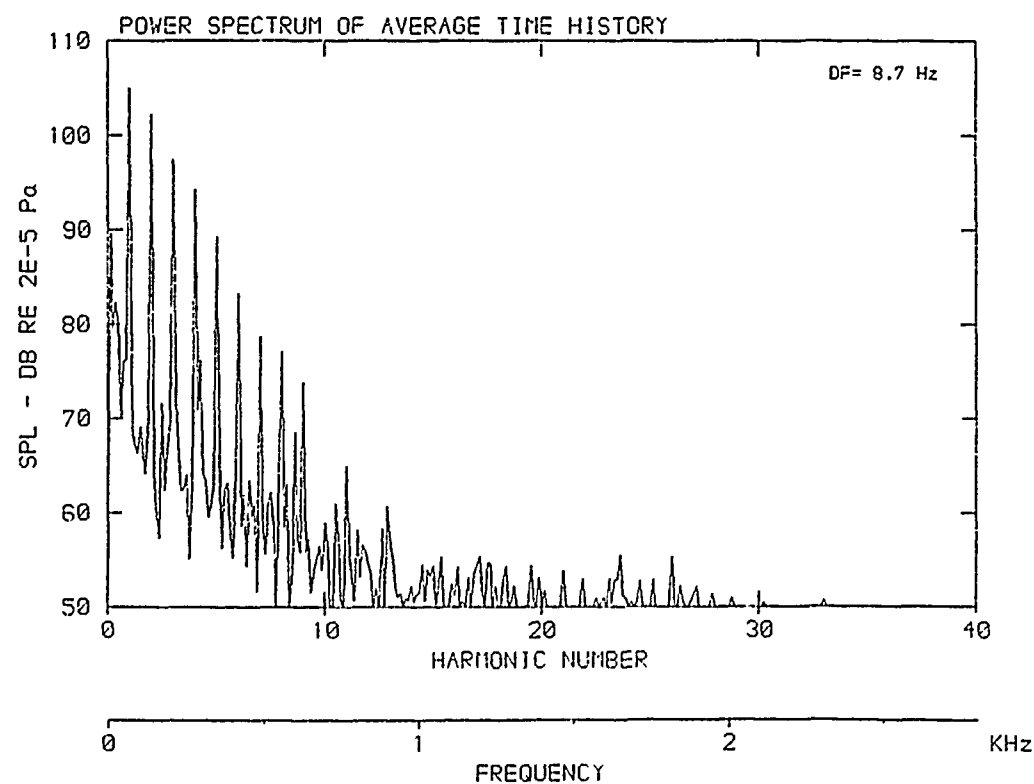
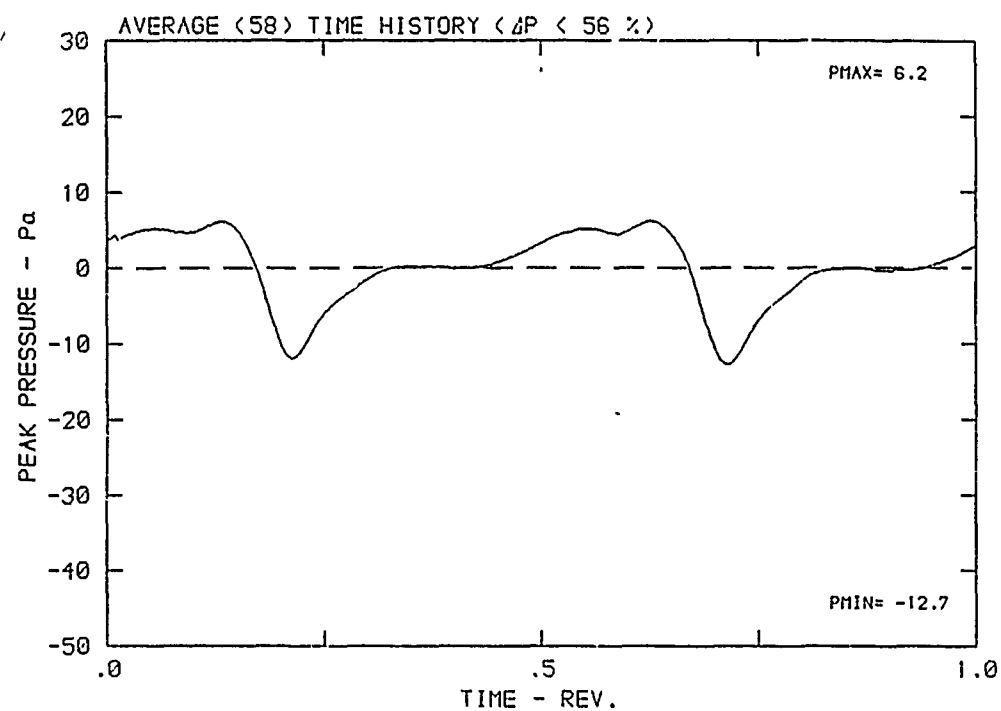
DATA POINT: AN-1    RUN: 63    MP: 2

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm     $v/u$ : .242     $\phi$ : .0°    T: 286.0 K



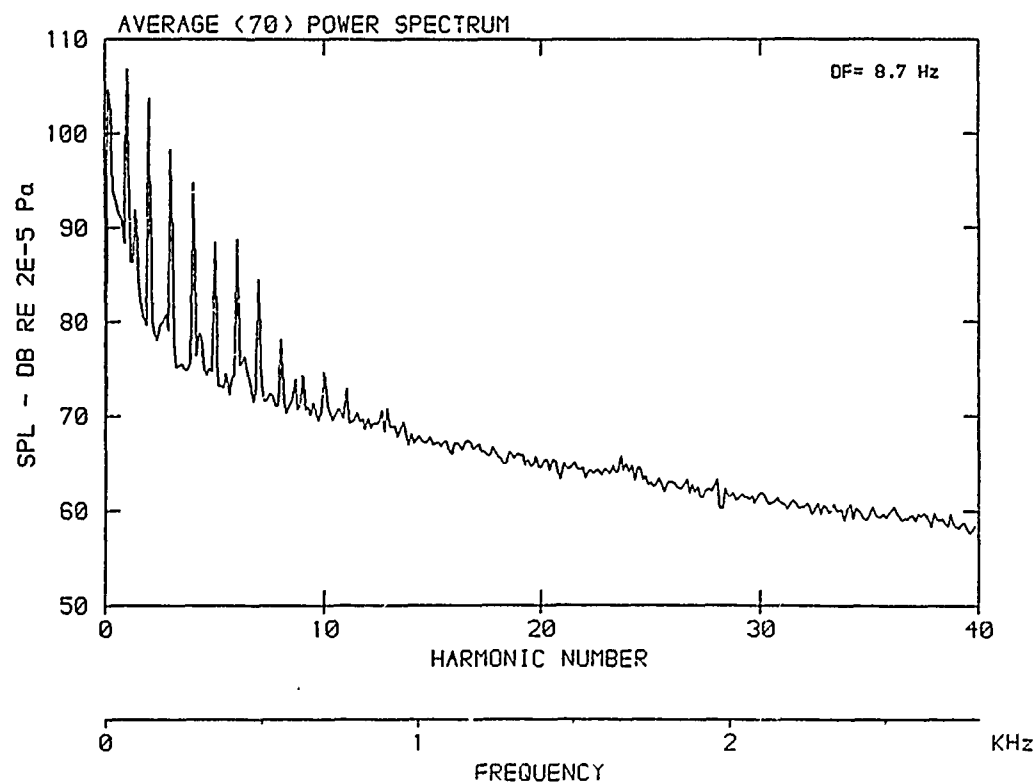
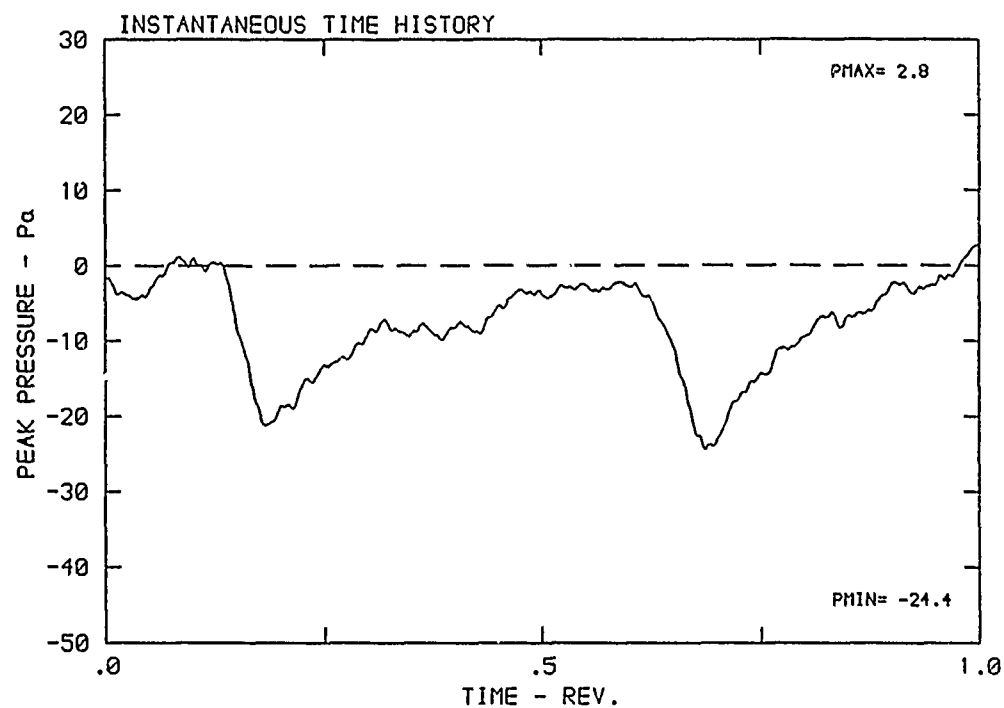
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$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



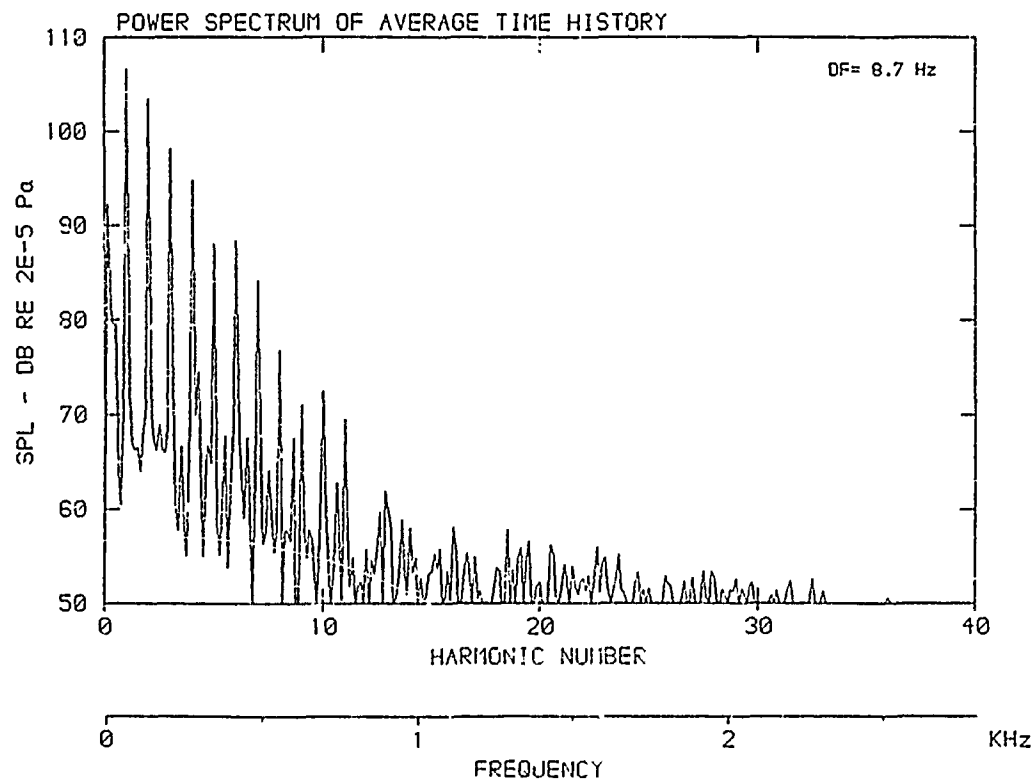
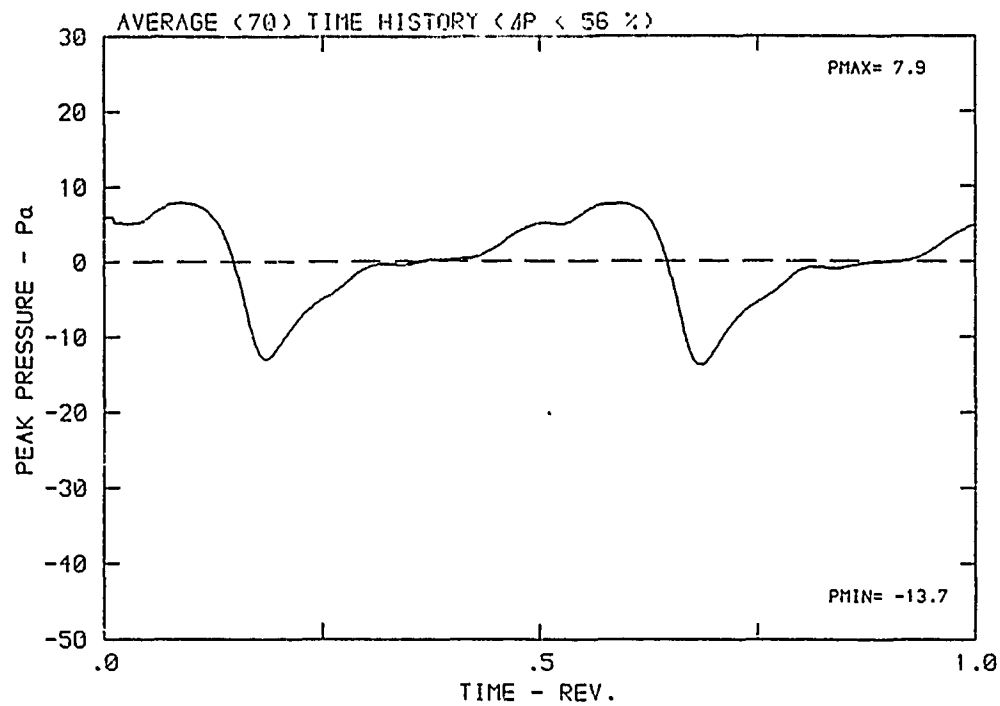
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$\beta$  : 20.8°    MH : .6779    n : 2100 rpm    v/u : .242     $\phi$  : .0°    T : 286.0 K



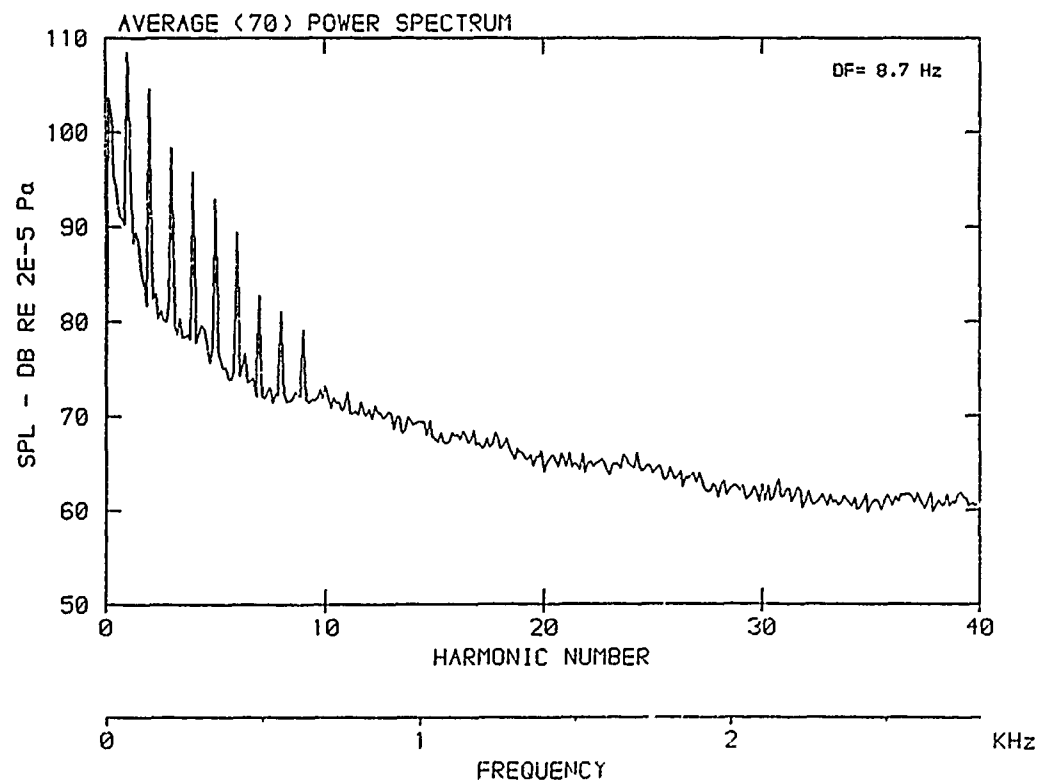
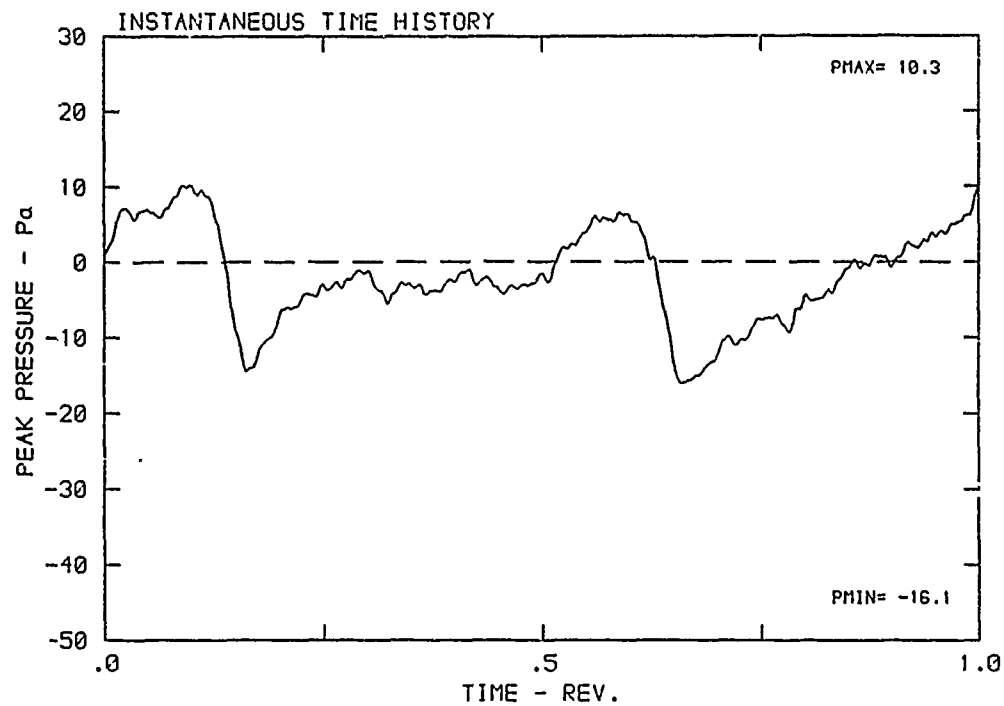
DATA POINT: AN-1      RUN: 63      MP: 3

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



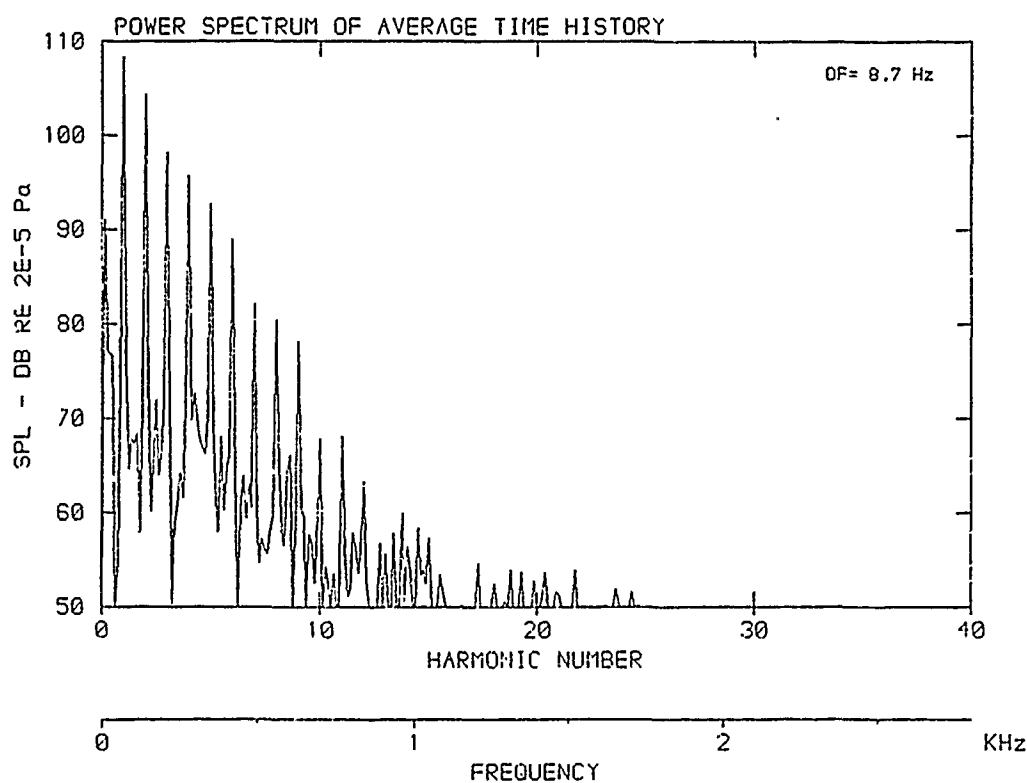
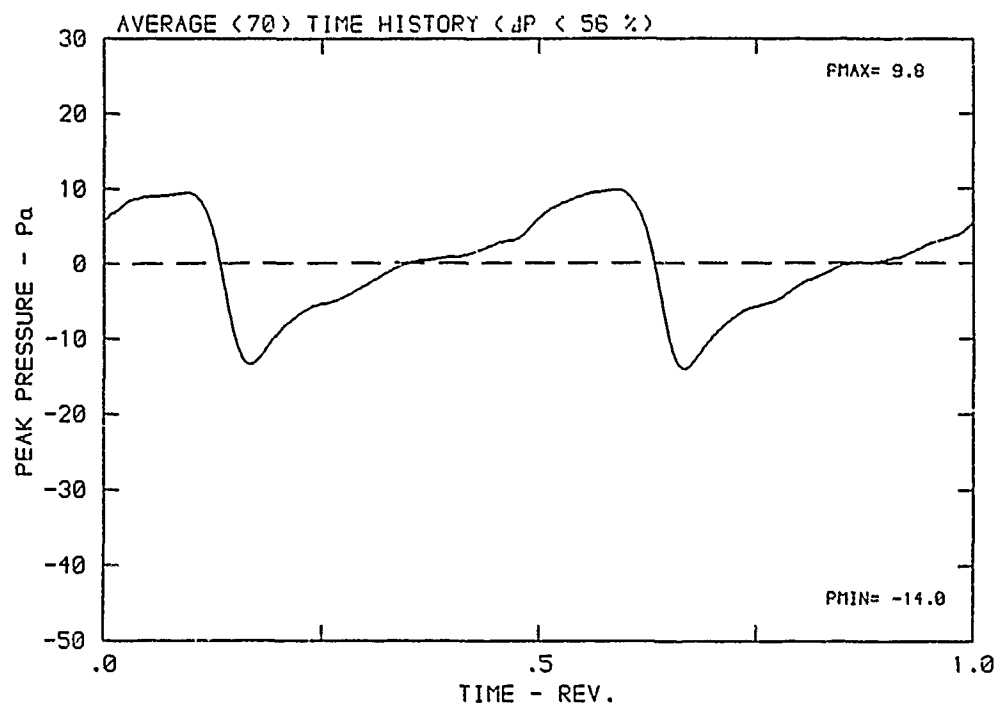
DATA POINT: AN-1 RUN: 63 MP: 4

$\beta$ : 20.8° MH: .6779 n: 2100 rpm v/u: .242  $\phi$ : .0° T: 286.0 K



DATA POINT: AN-1    RUN: 63    MP: 4

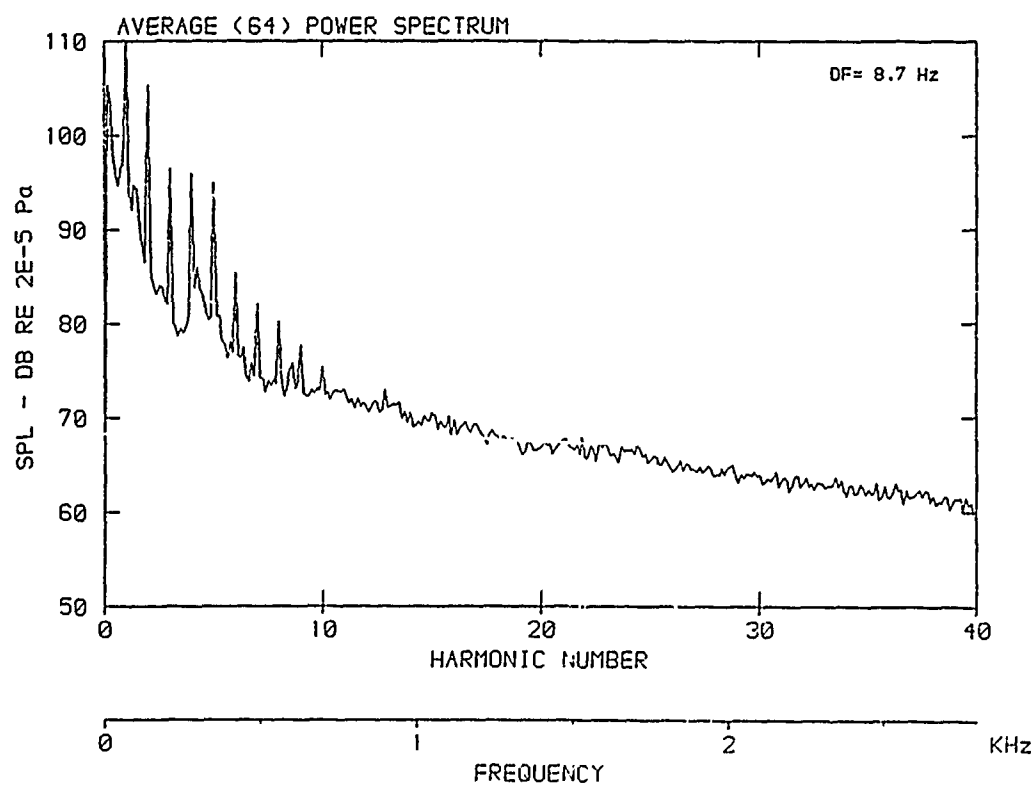
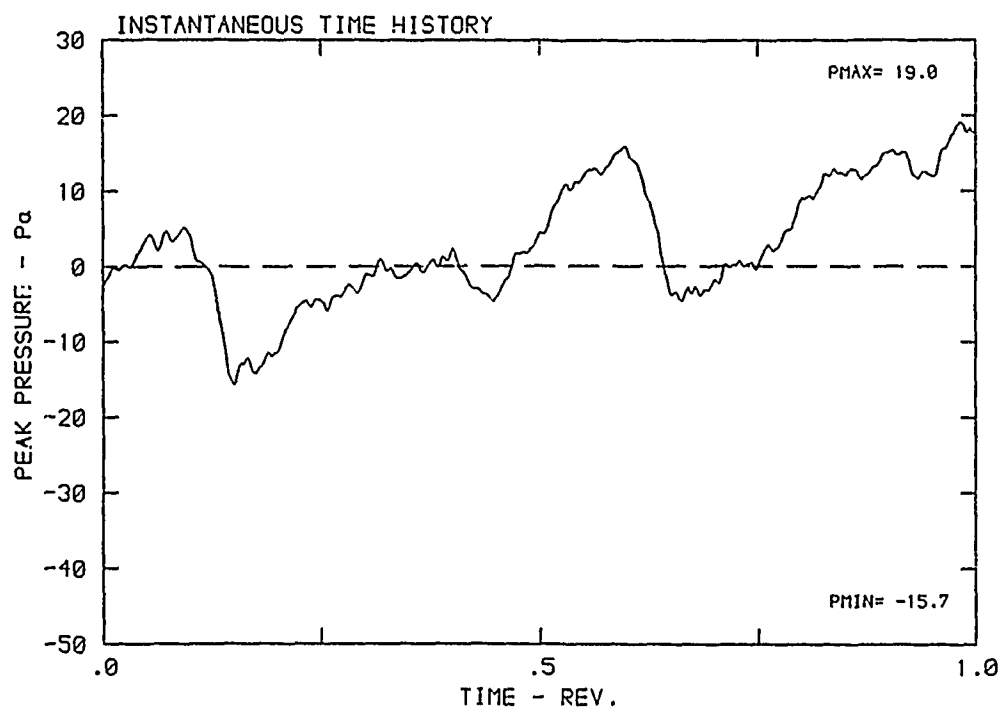
$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K





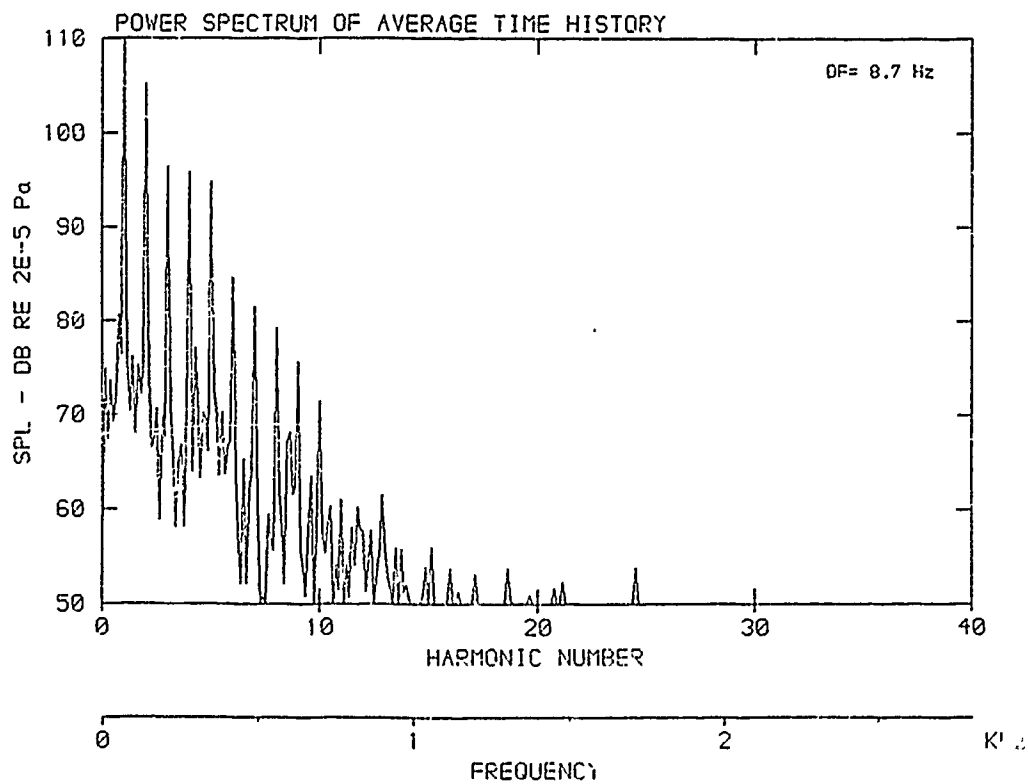
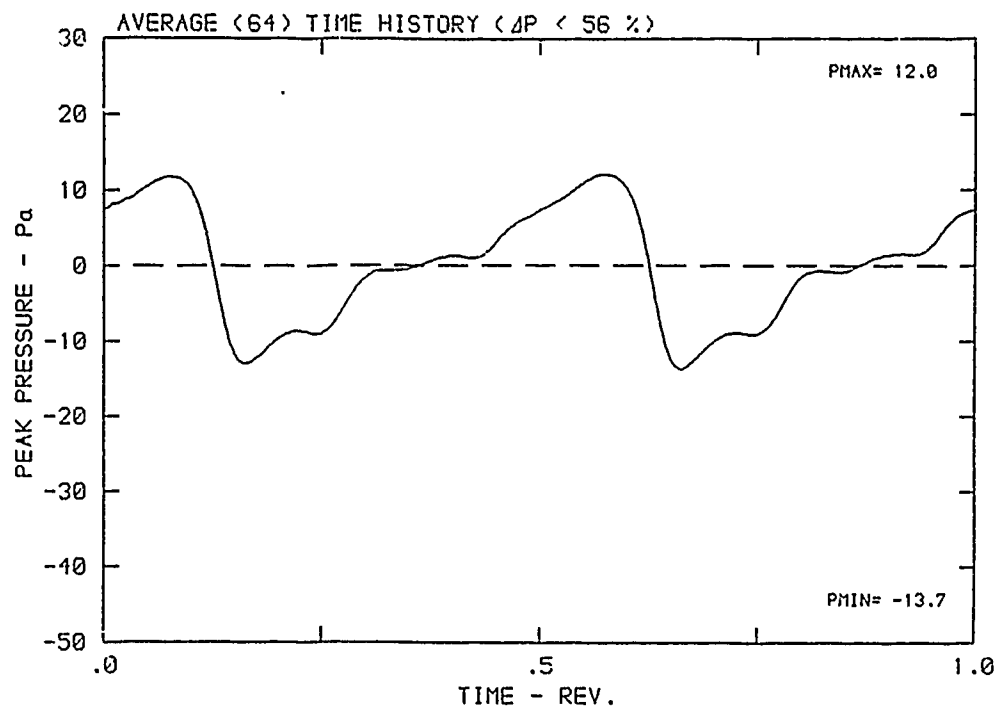
DATA POINT: AN-1      RUN: 63      MP: 5

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



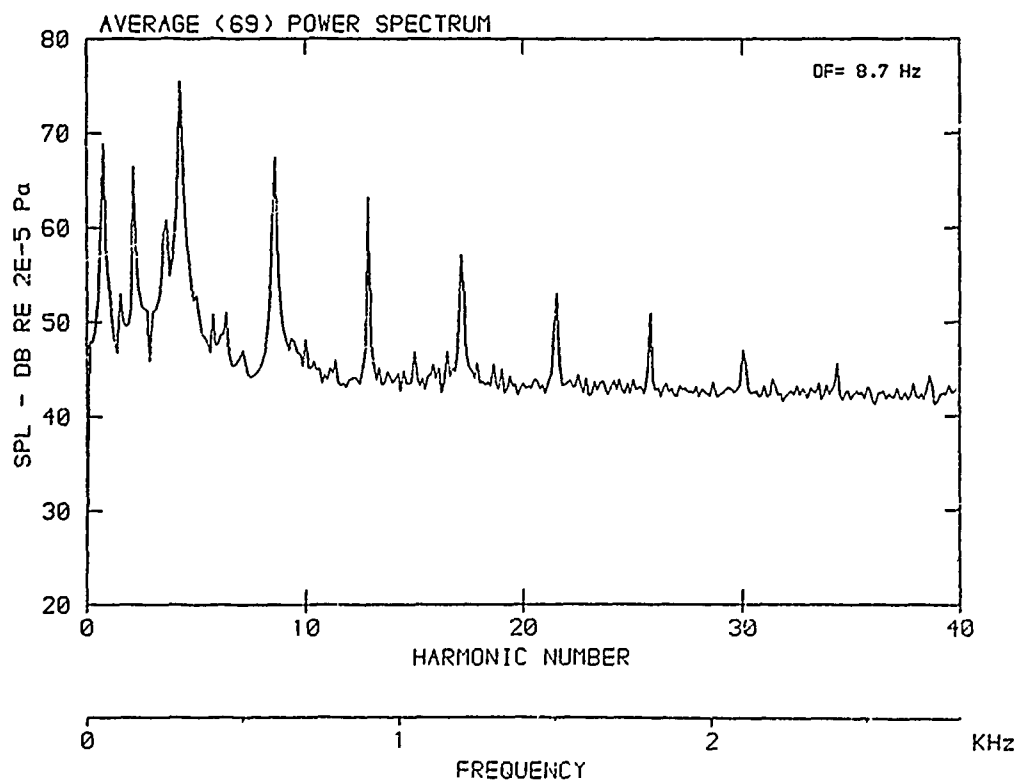
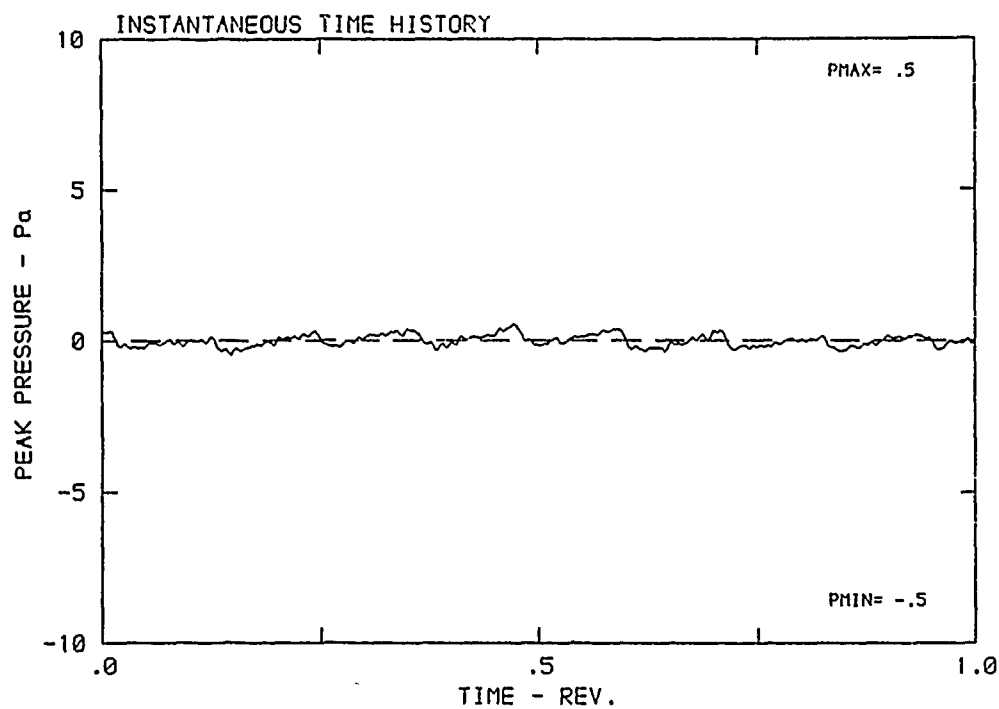
DATA POINT: AN-1      RUN: 63      MP: 5

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



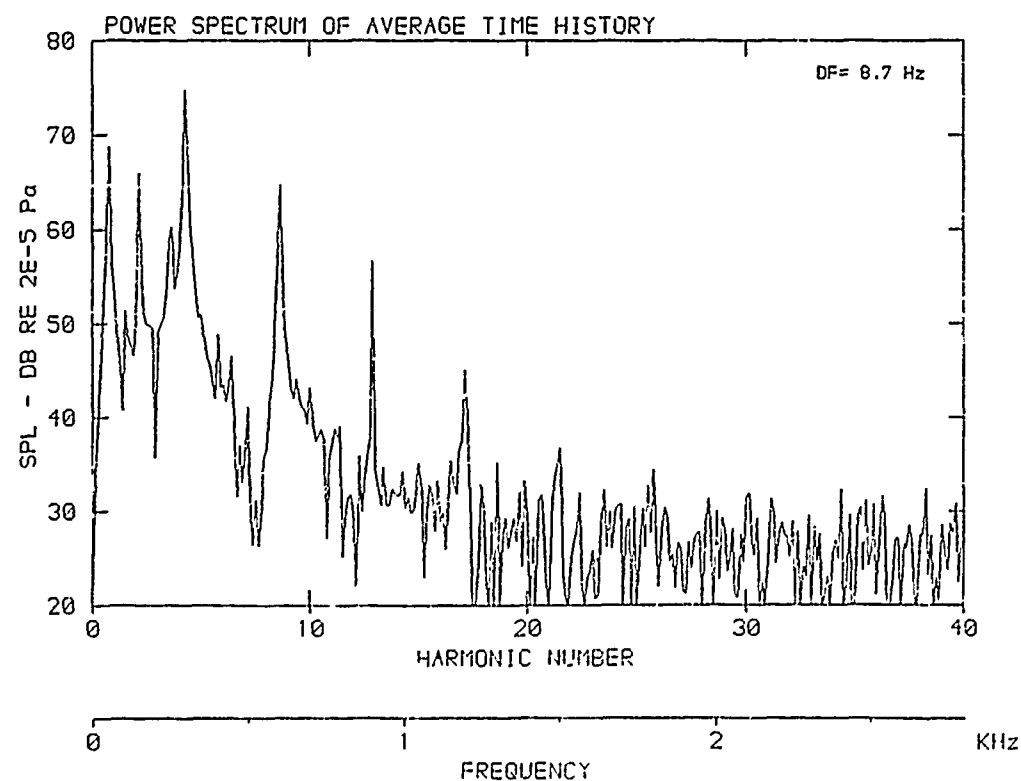
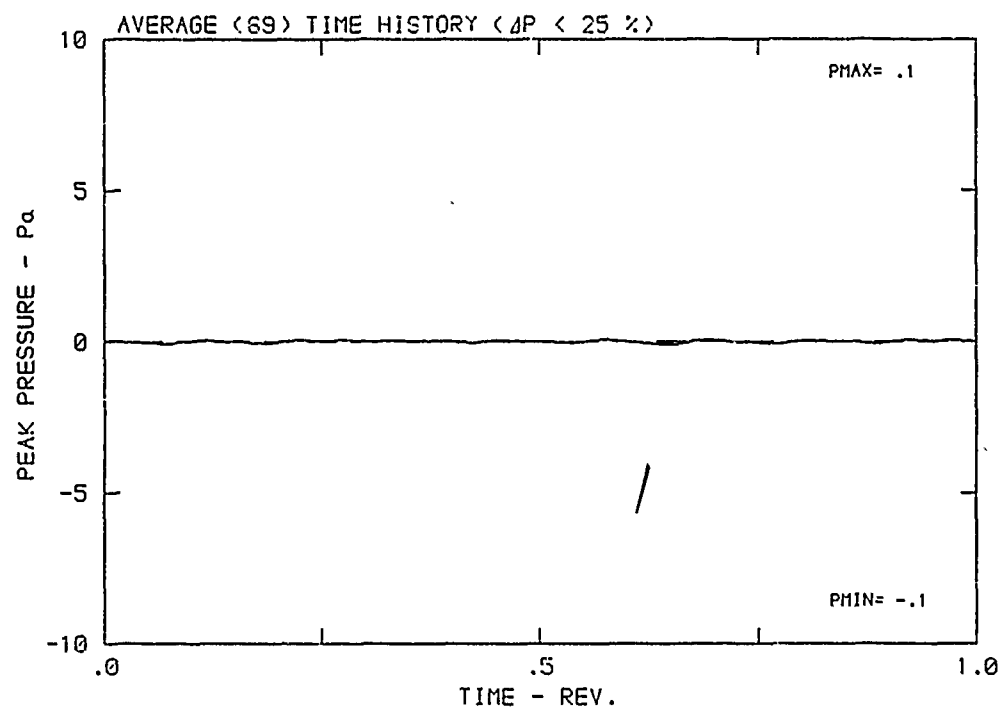
DATA POINT: AN-1      RUN: 63      MP: 6

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



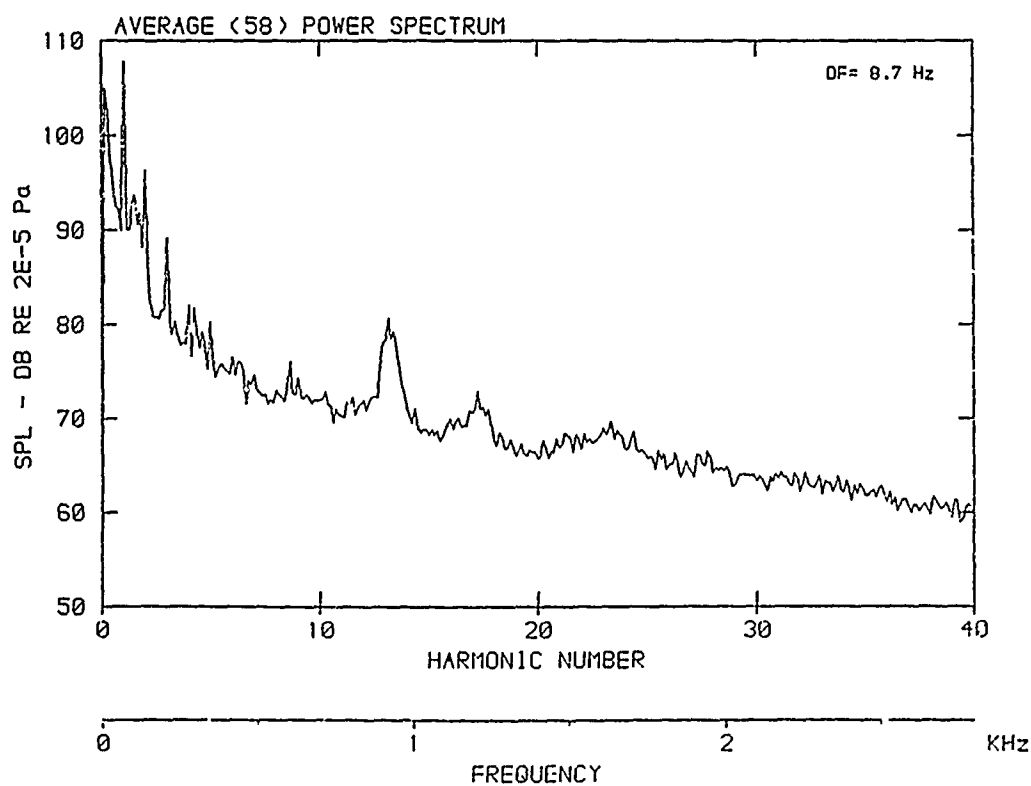
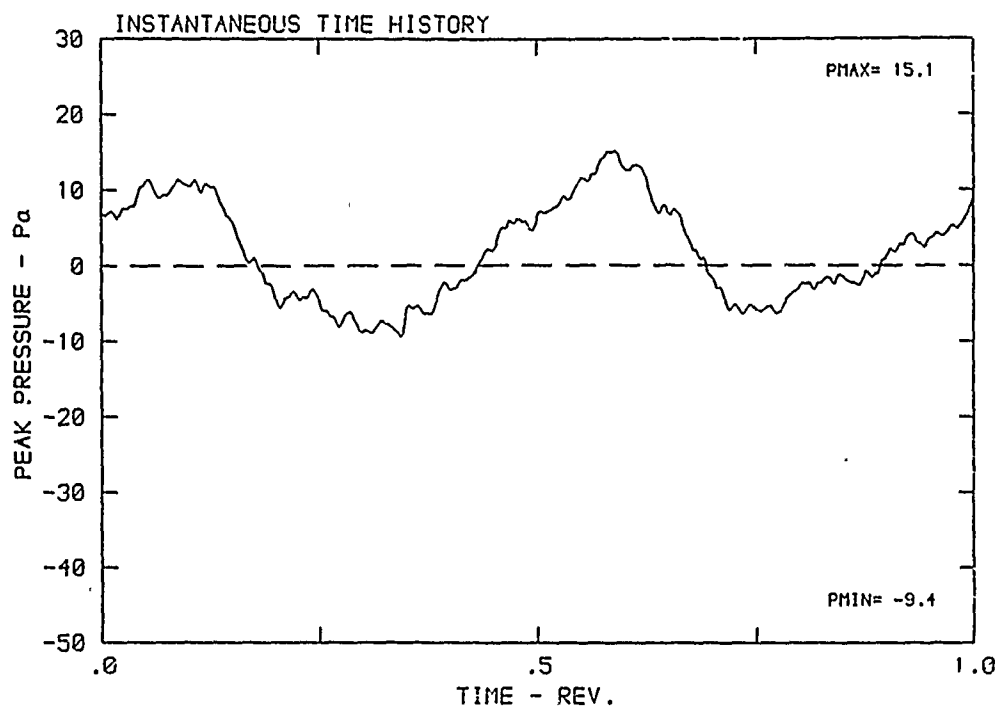
DATA POINT: AN-1      RUN: 63      MP: 6

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



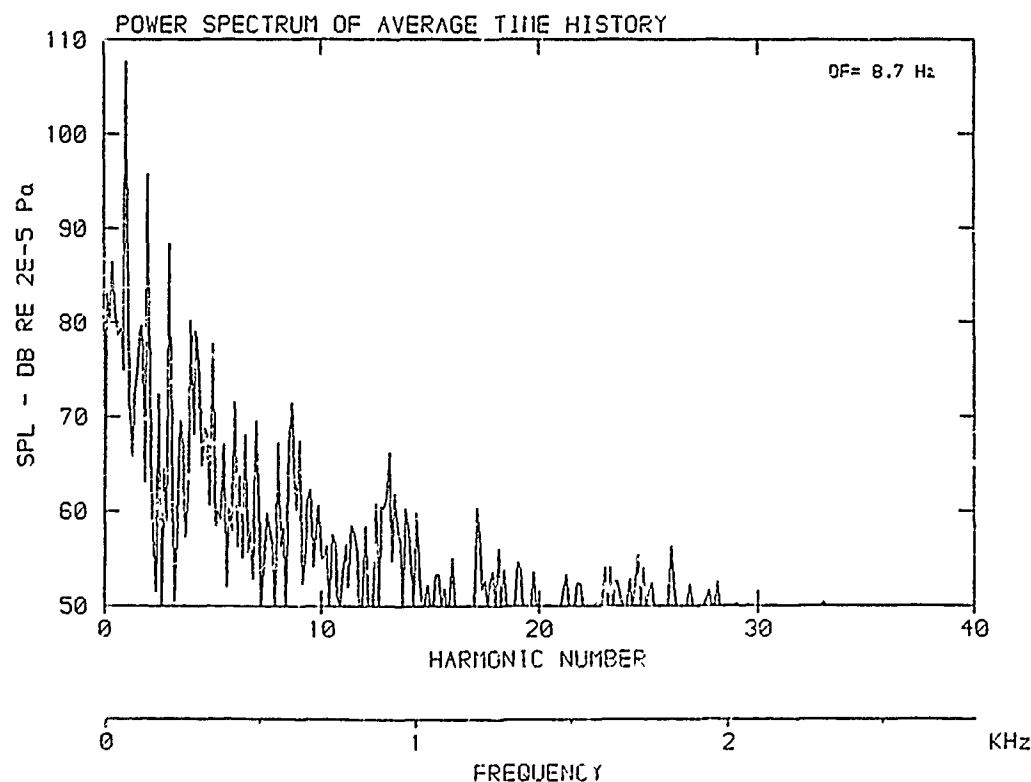
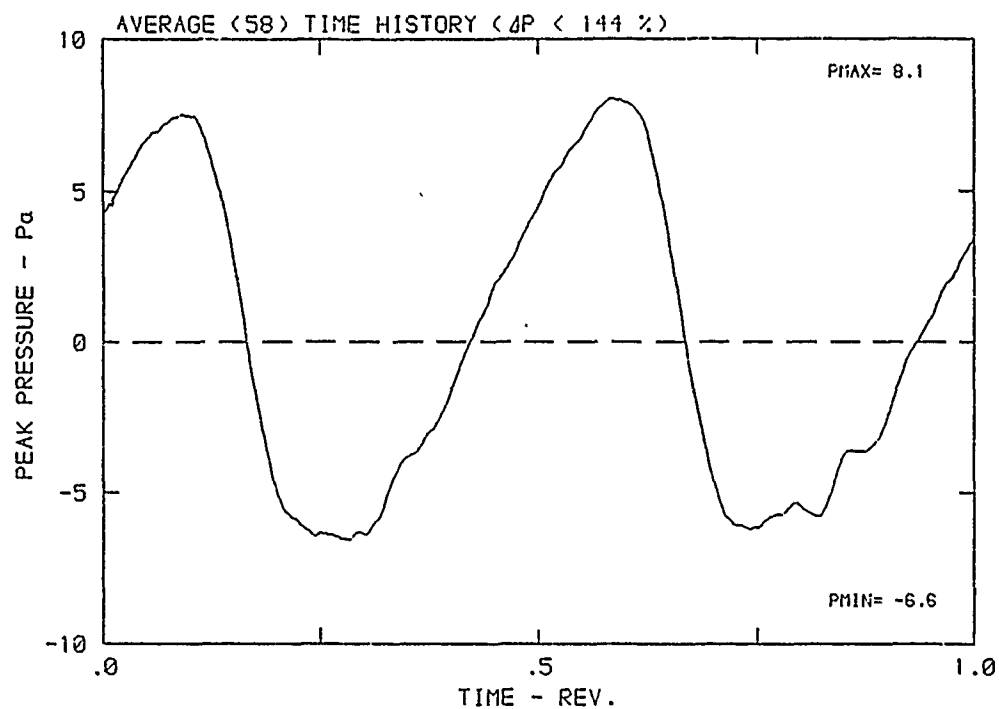
DATA POINT: AN-1    RUN: 63    MP: 7

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



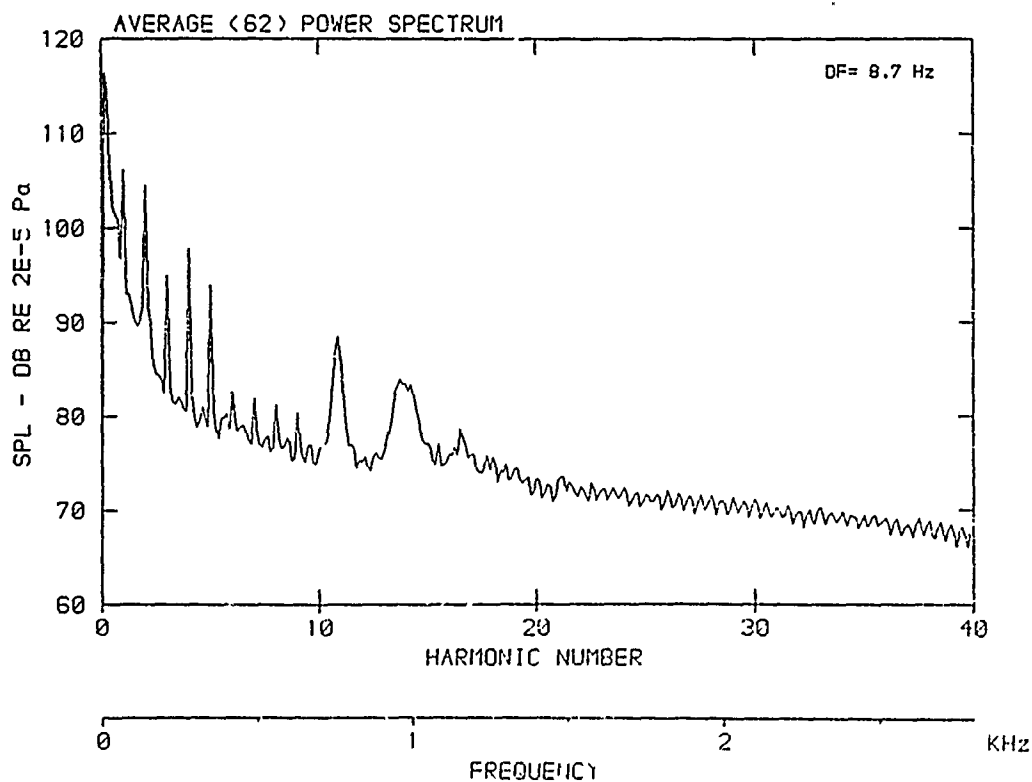
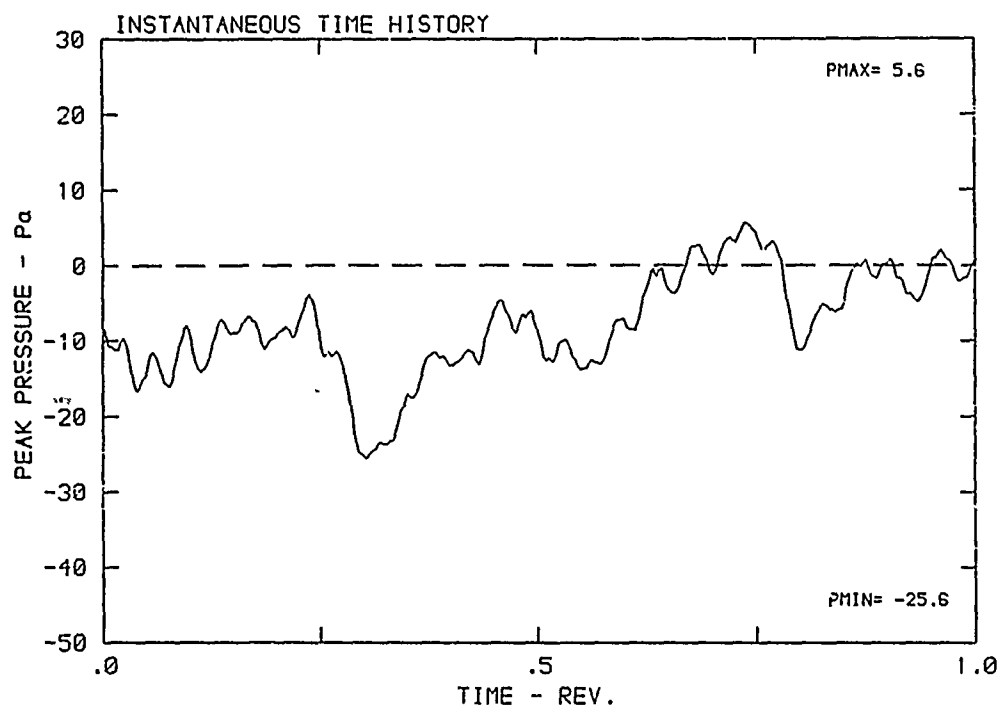
DATA POINT: AN-1 RUN: 63 MP: 7

$\beta$ : 20.8° MH: .6779 n: 2100 rpm  $v/u$ : .242  $\phi$ : .0° T: 286.0 K



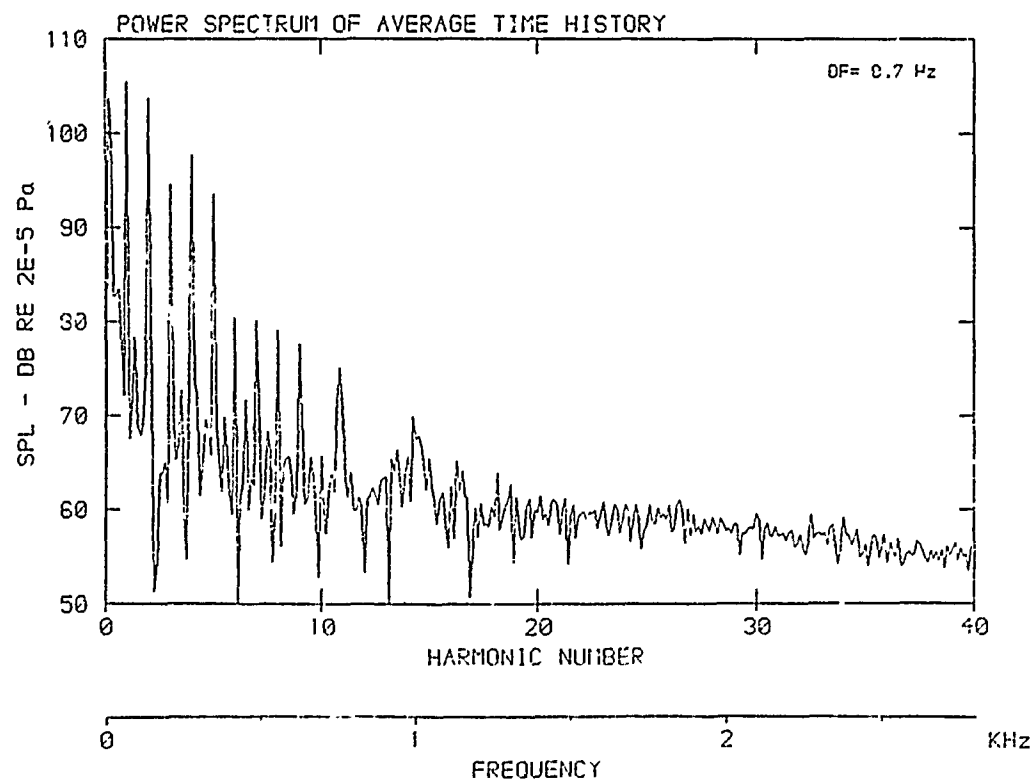
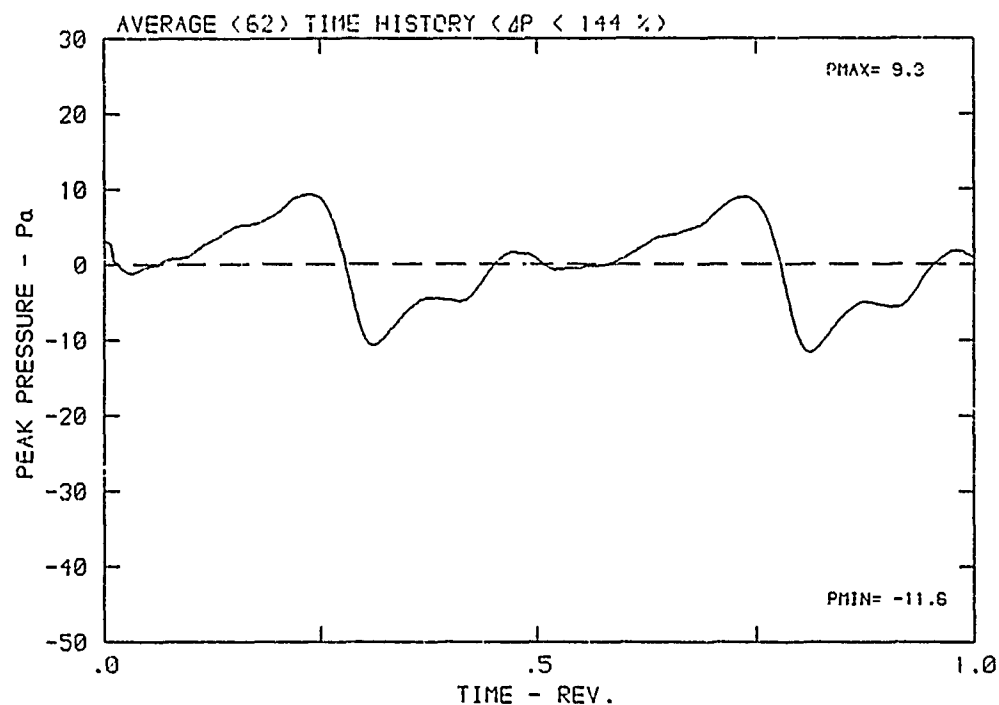
DATA POINT: AN-1      RUN: 63      MP: 9

$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K



DATA POINT: AN-1    RUN: 63    MP: 9

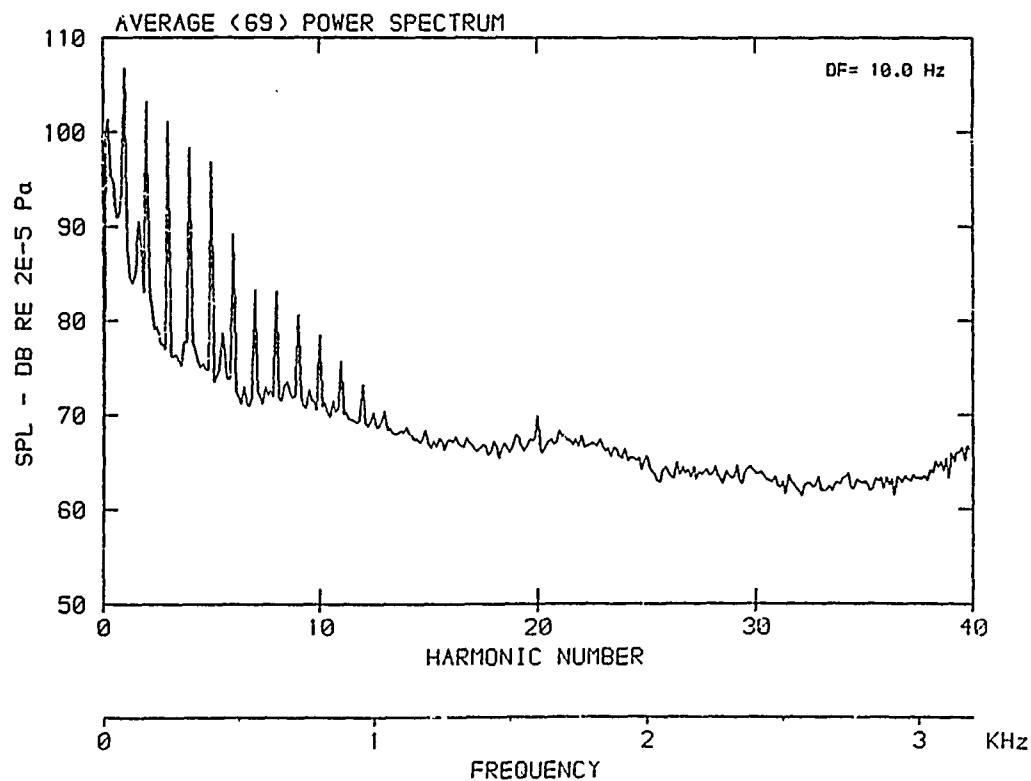
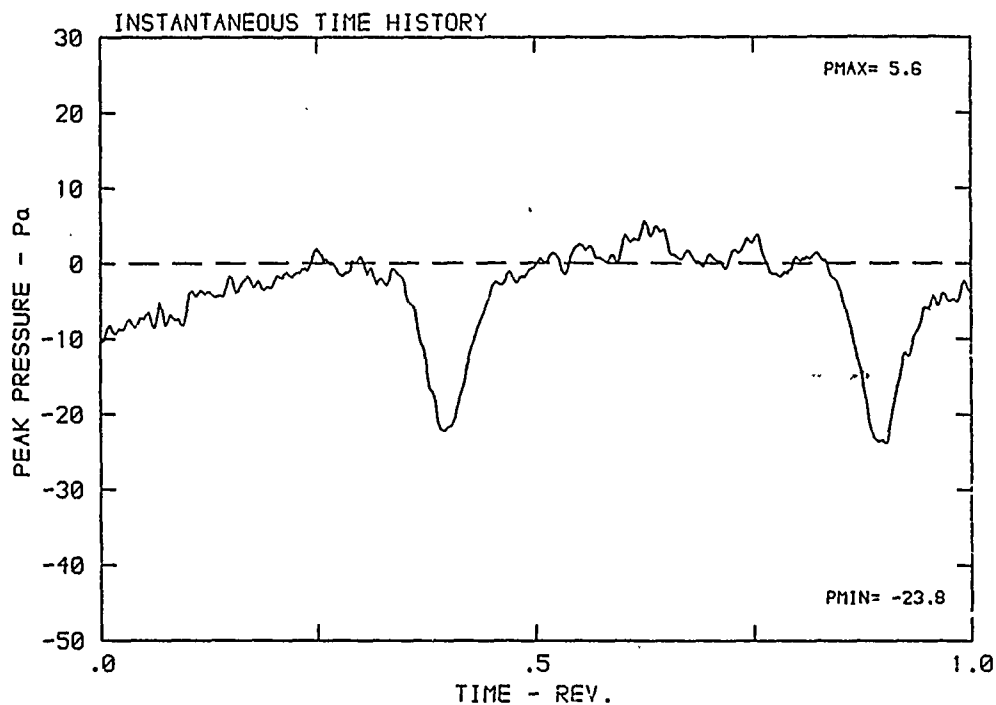
$\beta$ : 20.8°    MH: .6779    n: 2100 rpm    v/u: .242     $\phi$ : .0°    T: 286.0 K





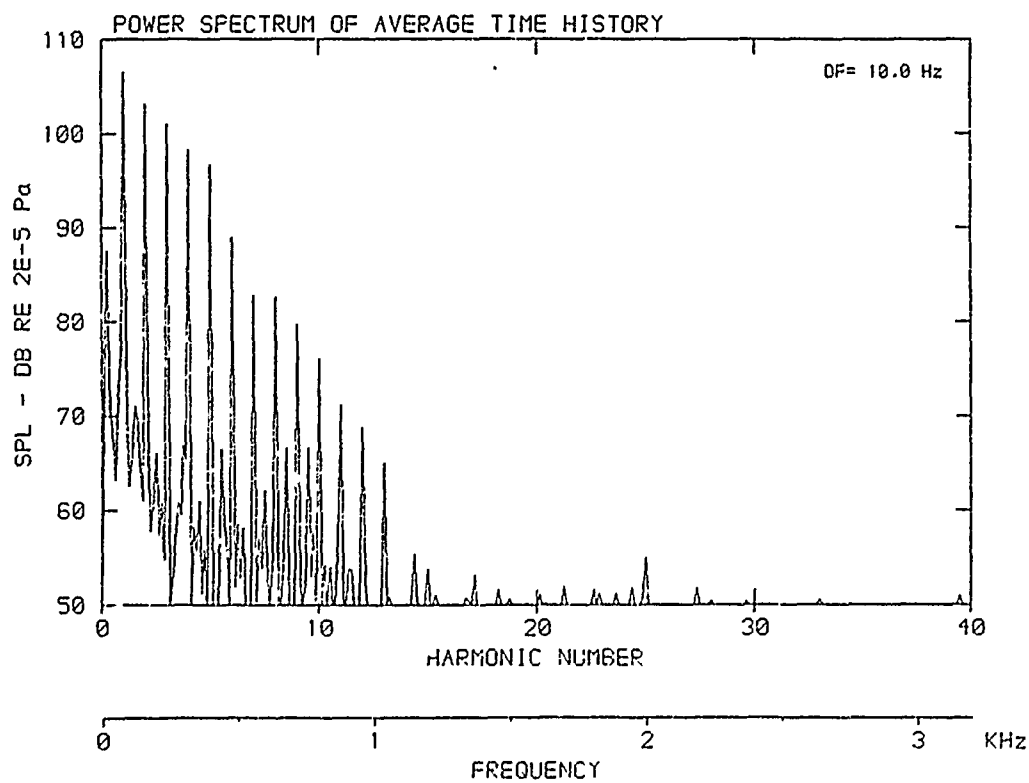
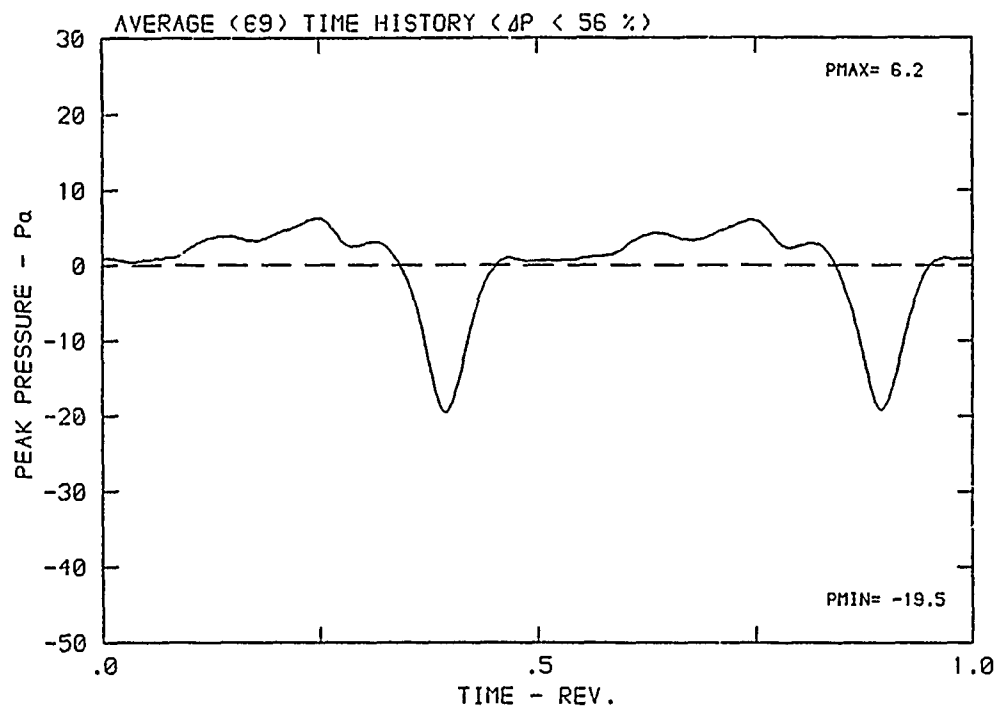
DATA POINT: AN-2      RUN: 64      MP: 1

$\beta$ :  $20.8^\circ$     MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ :  $.0^\circ$     T: 286.5 K



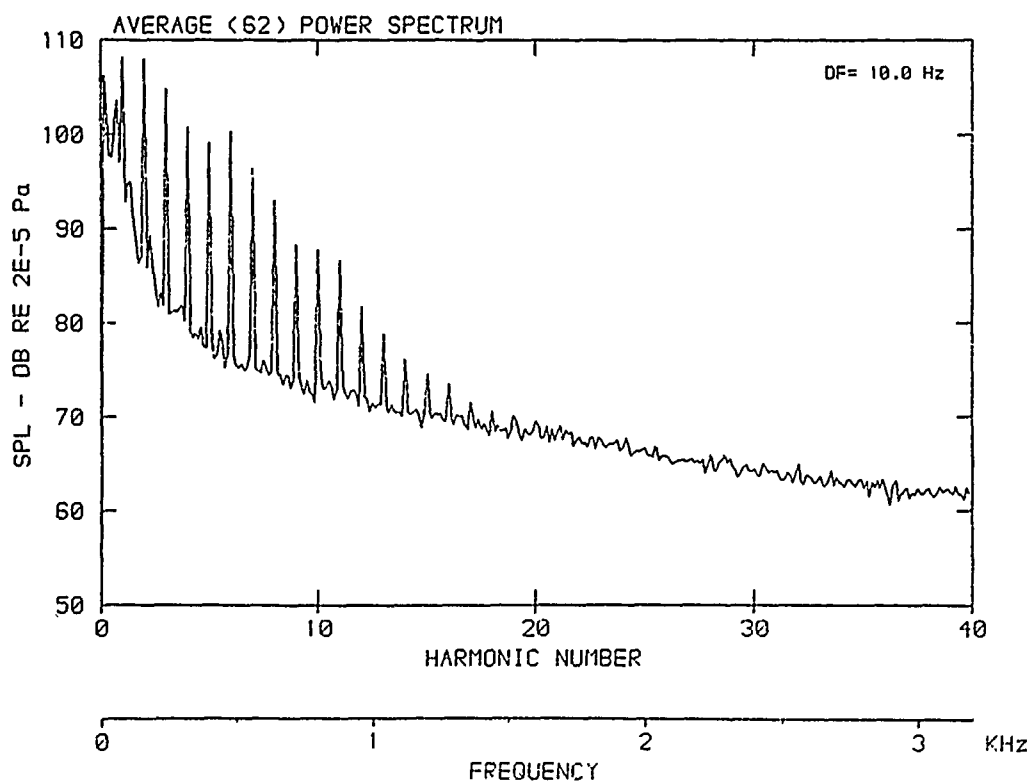
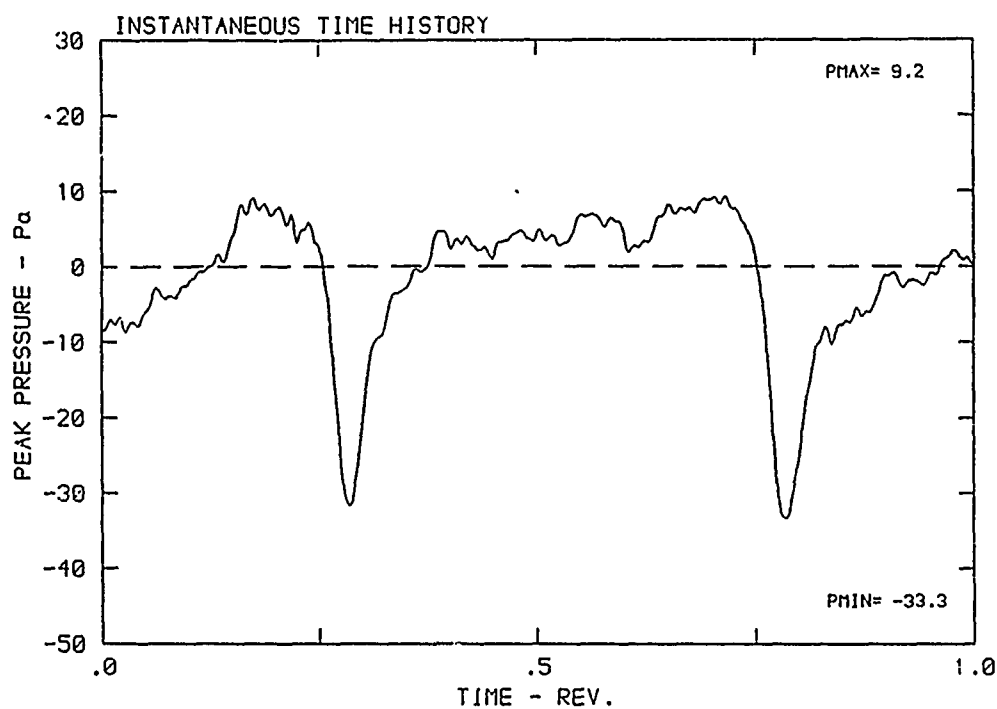
DATA POINT.: AN-2      RUN: 64      MP: 1

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



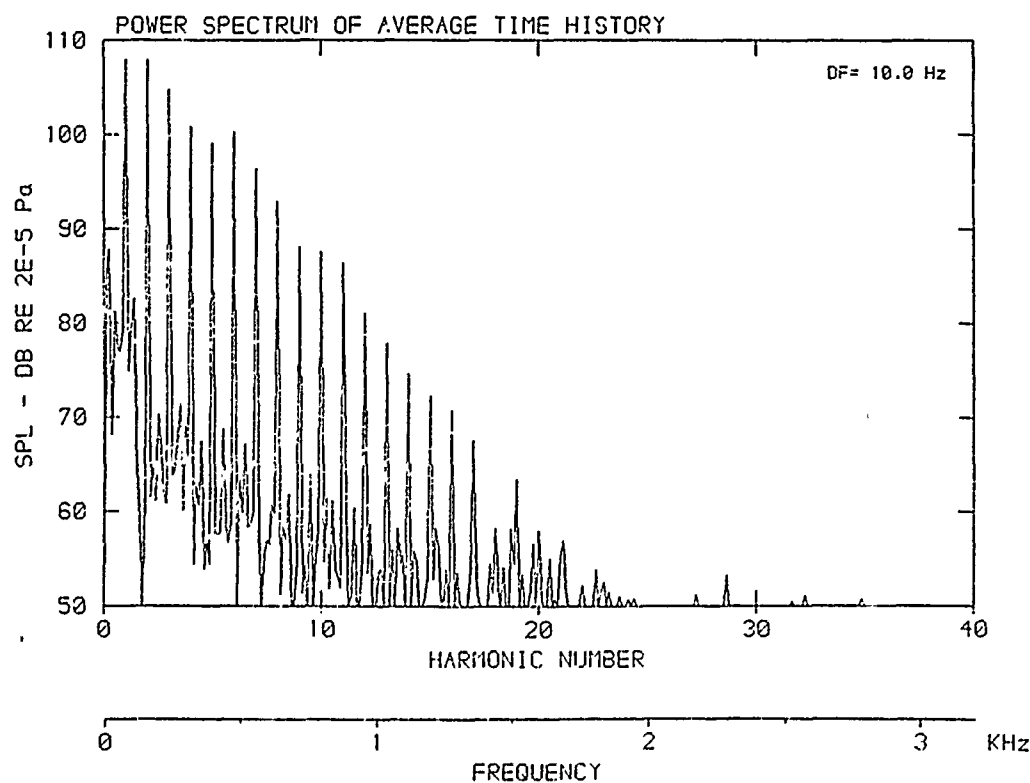
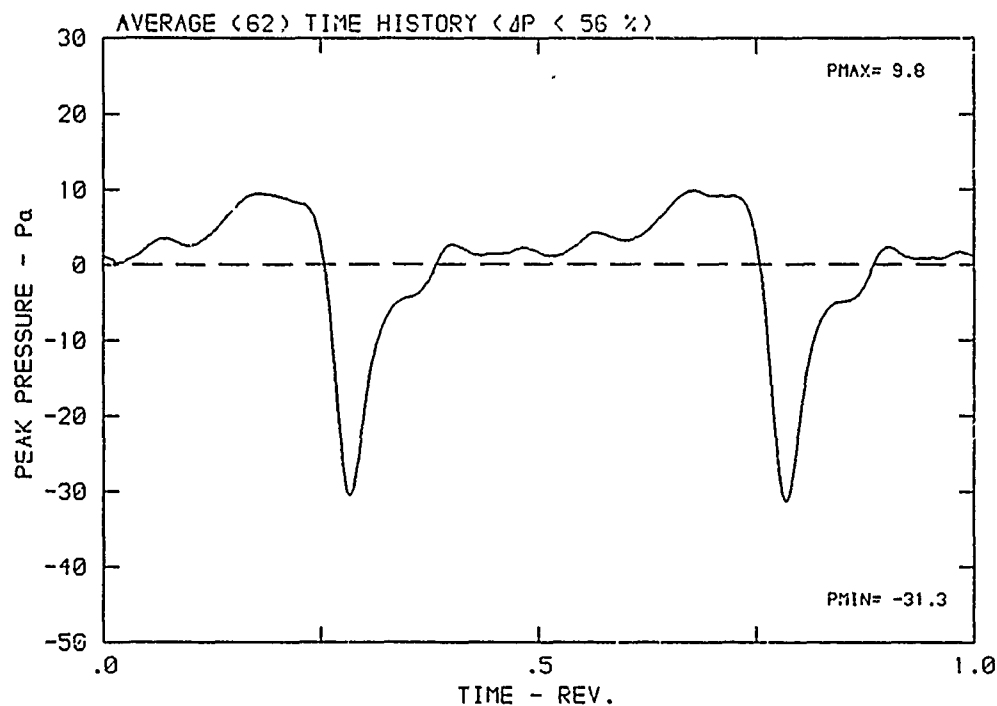
DATA POINT: AN-2    RUN: 64    MP: 2

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



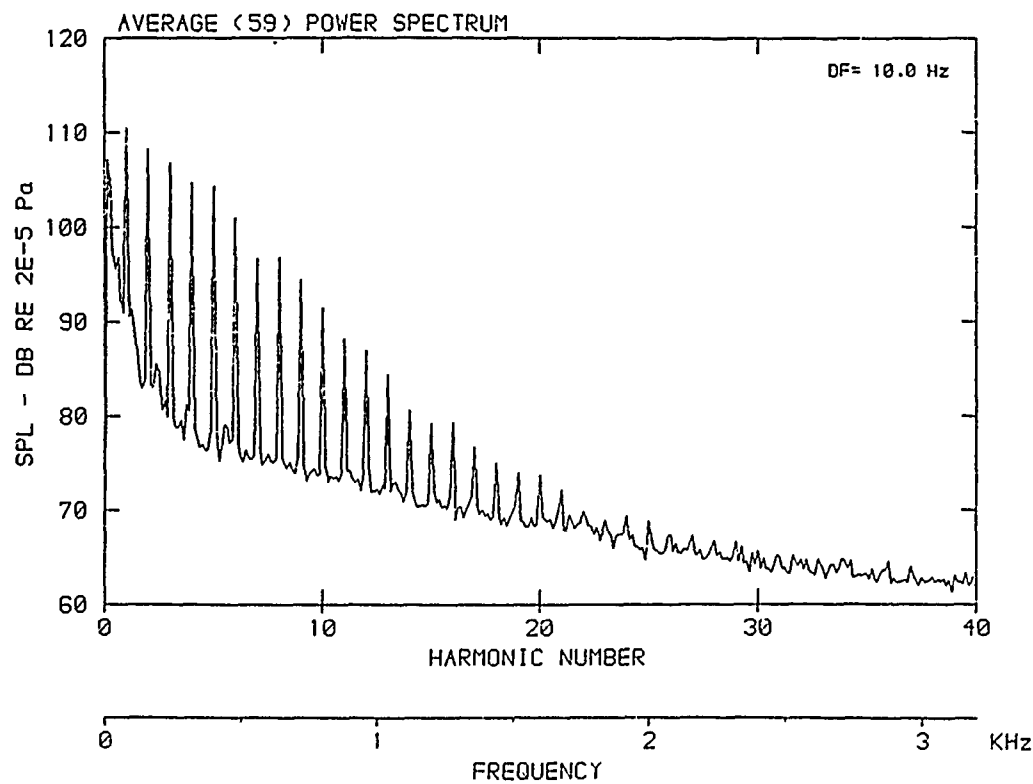
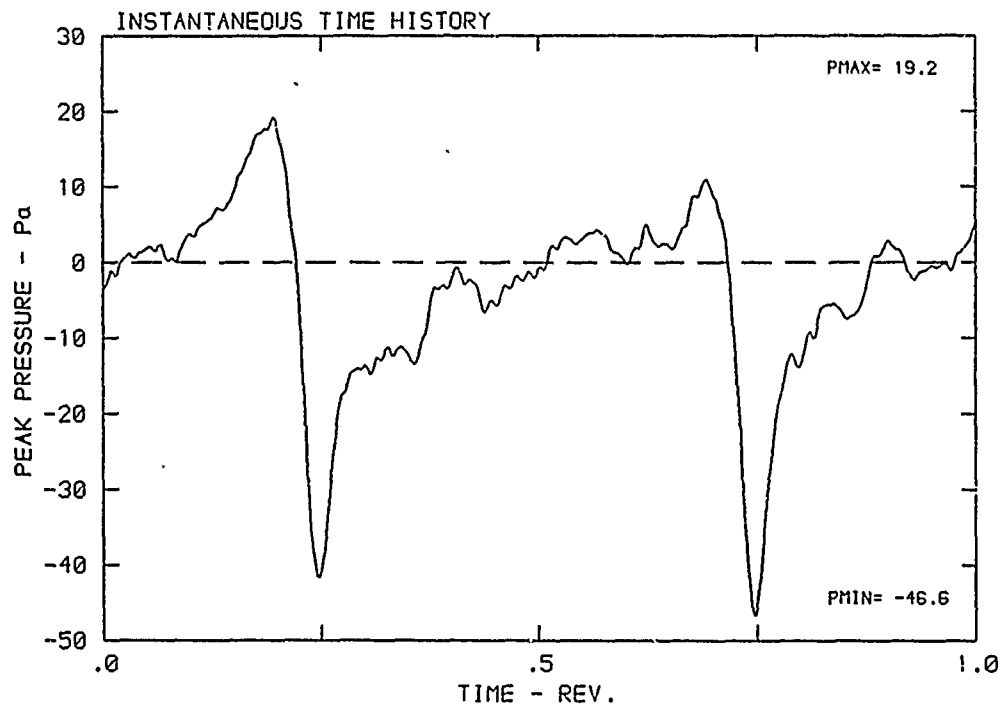
DATA POINT: AN-2    RUN: 64    MP: 2

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



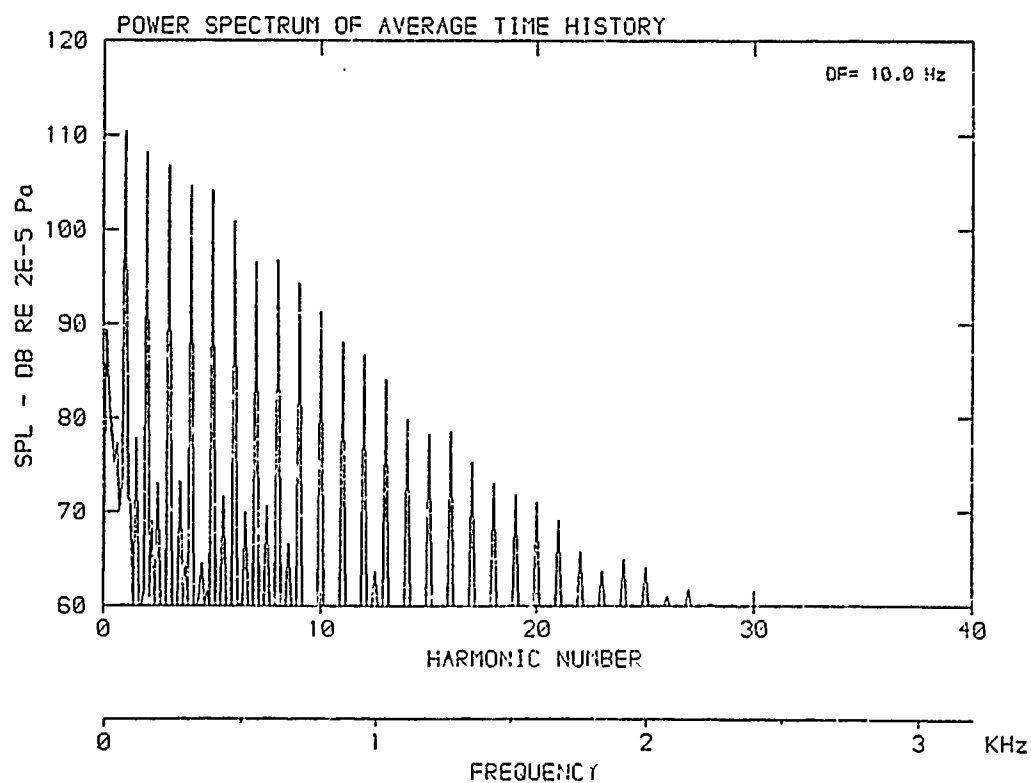
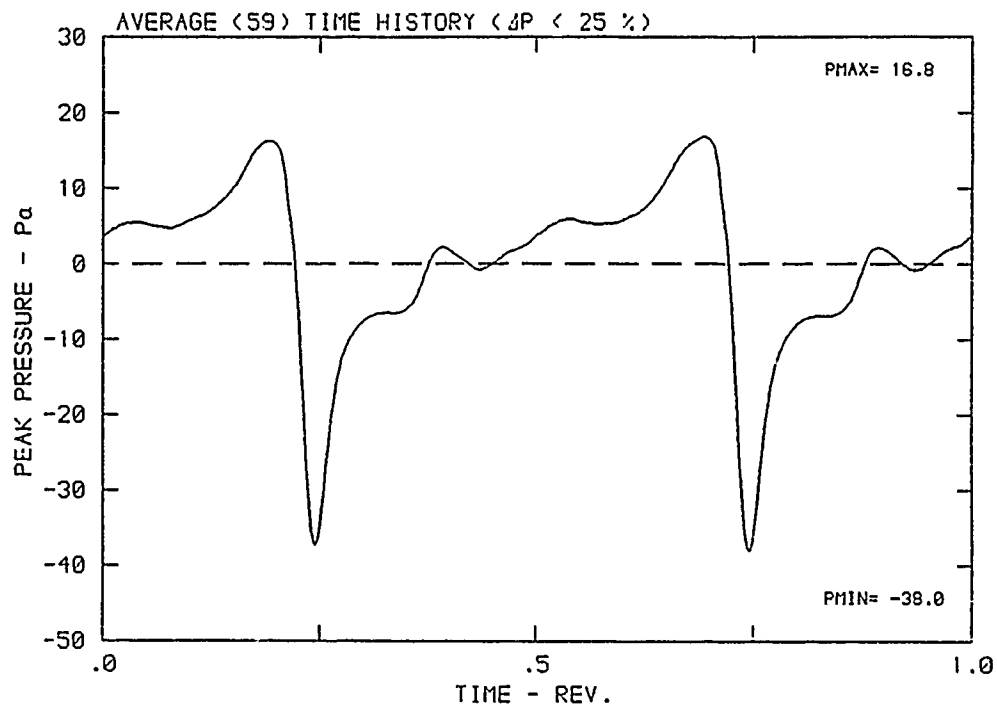
DATA POINT: AN-2      RUN: 64      MP: 3

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



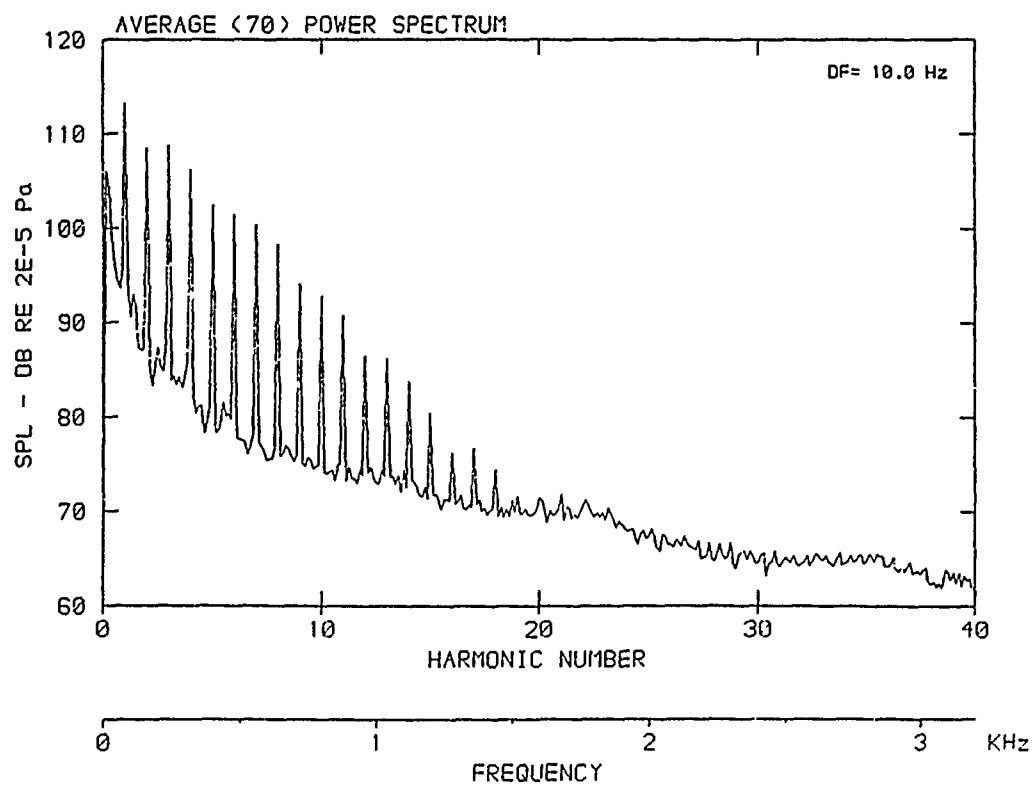
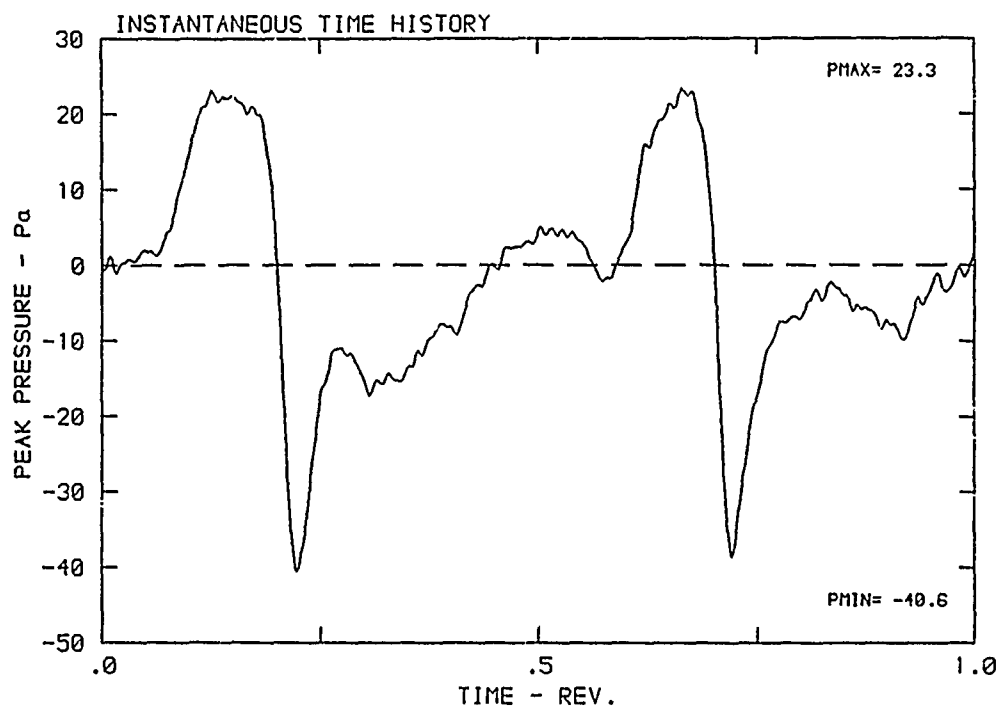
DATA POINT: AN-2      RUN: 64      MP: 3

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



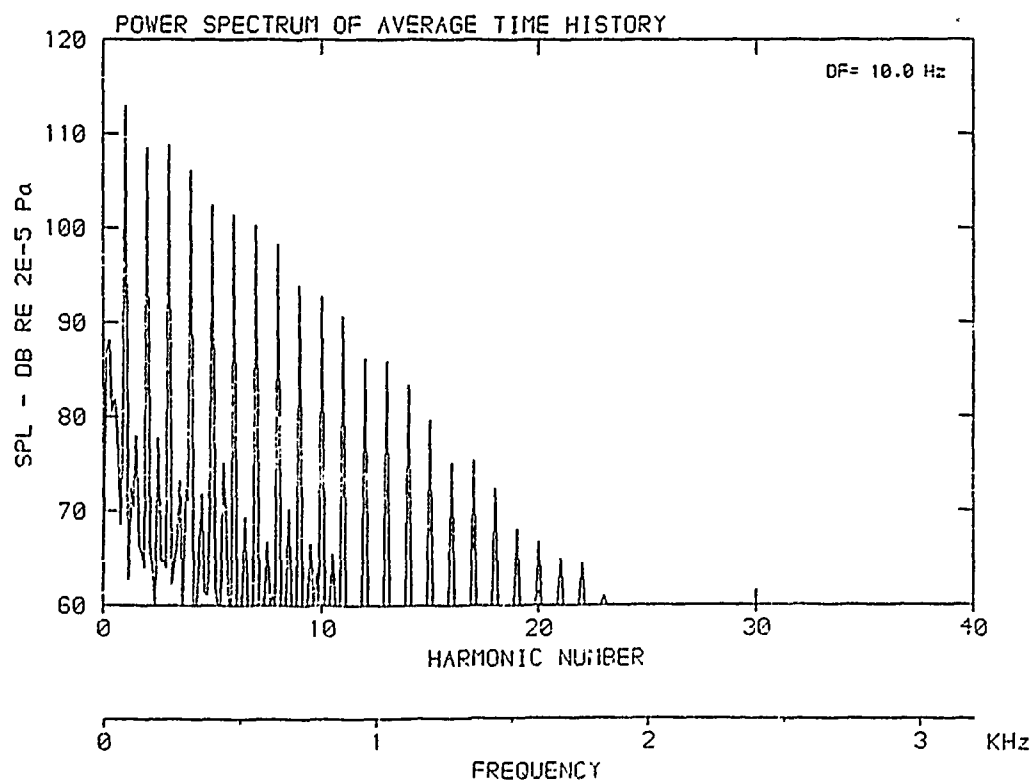
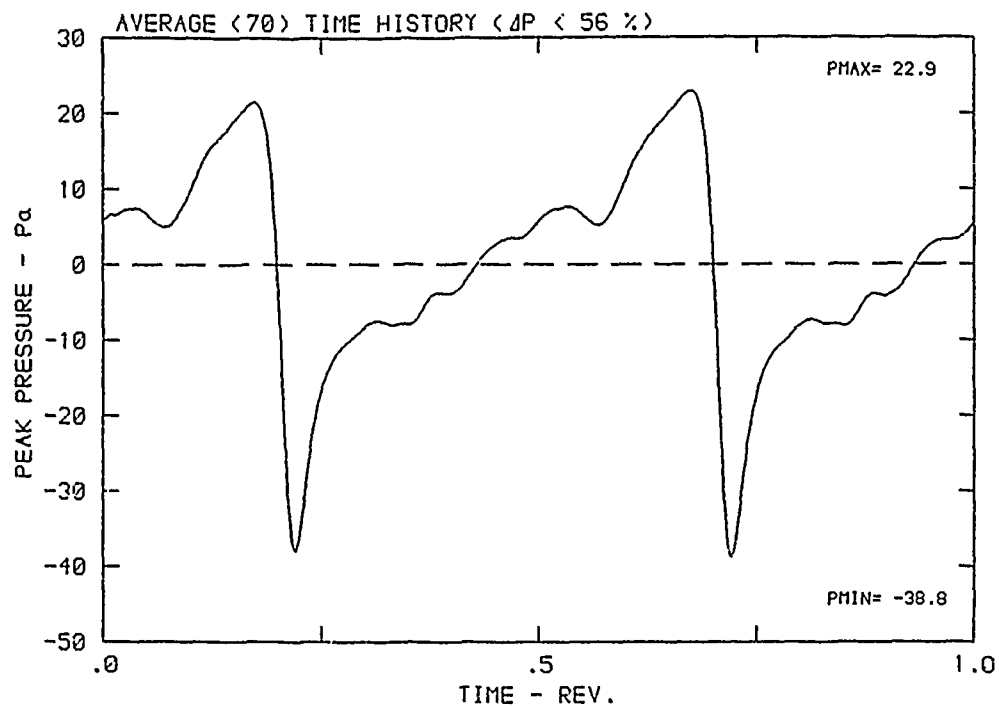
DATA POINT: AN-2    RUN: 64    MP: 4

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



DATA POINT: AN-2    RUN: 64    MP: 4

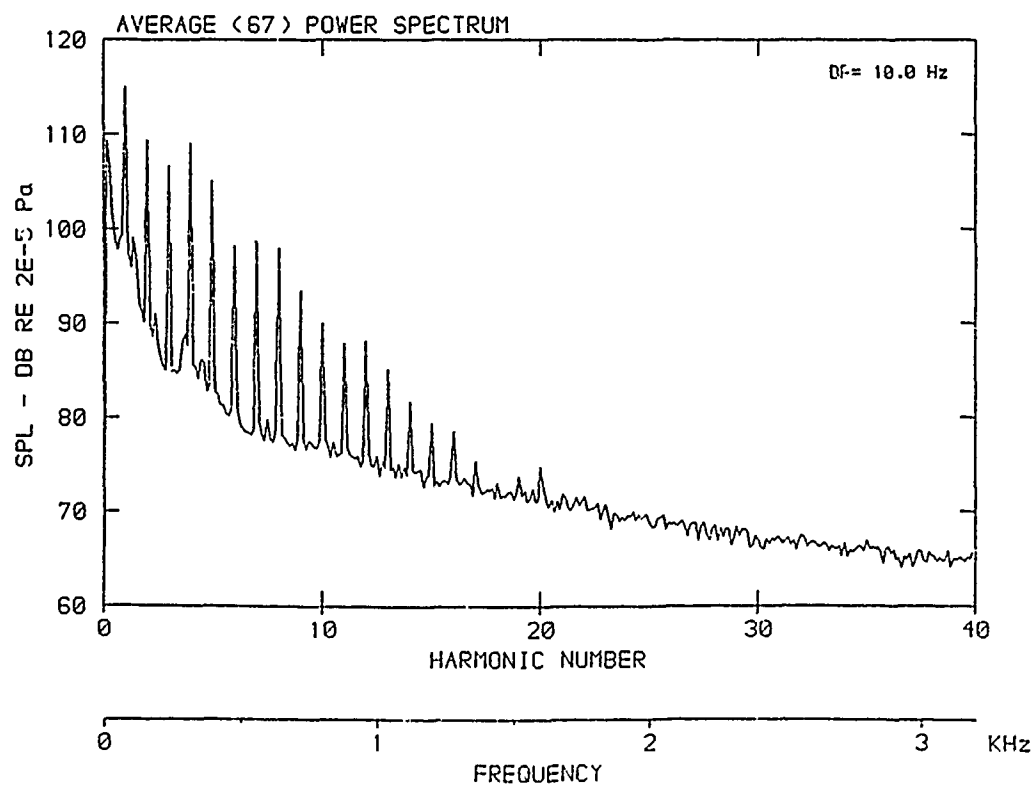
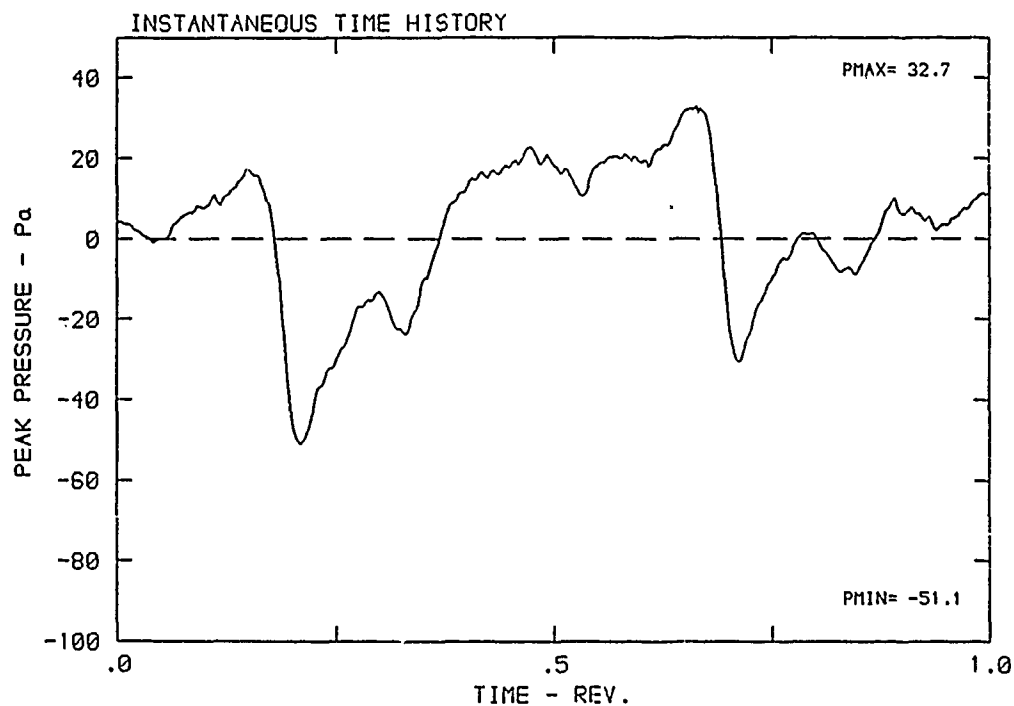
$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K





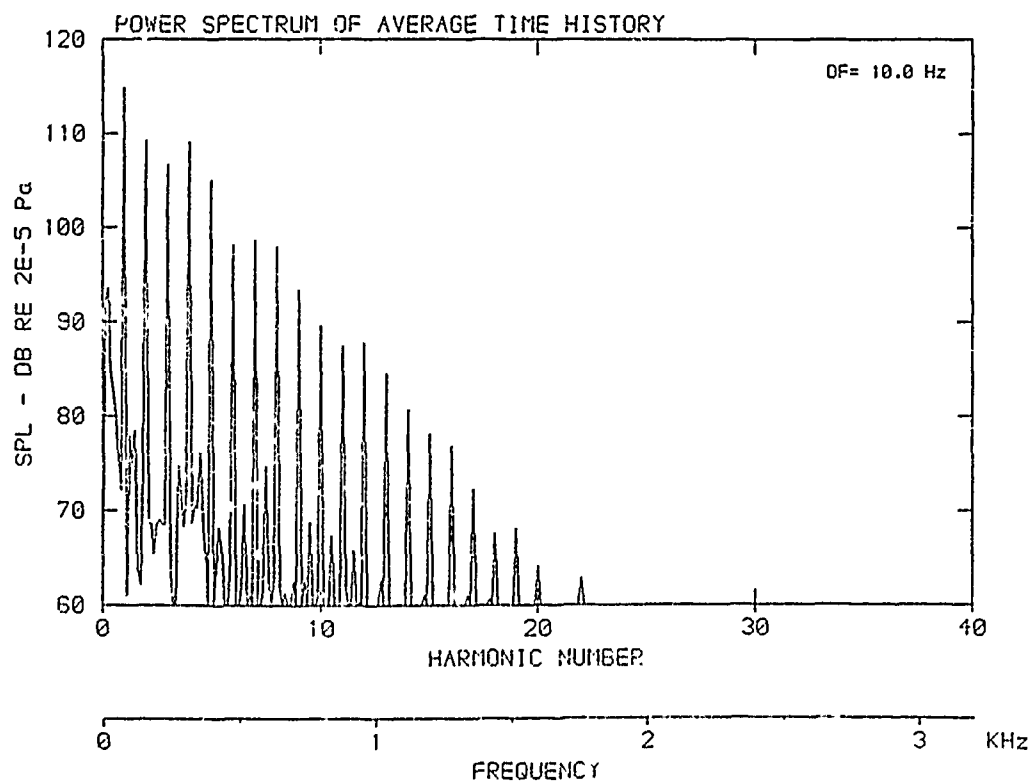
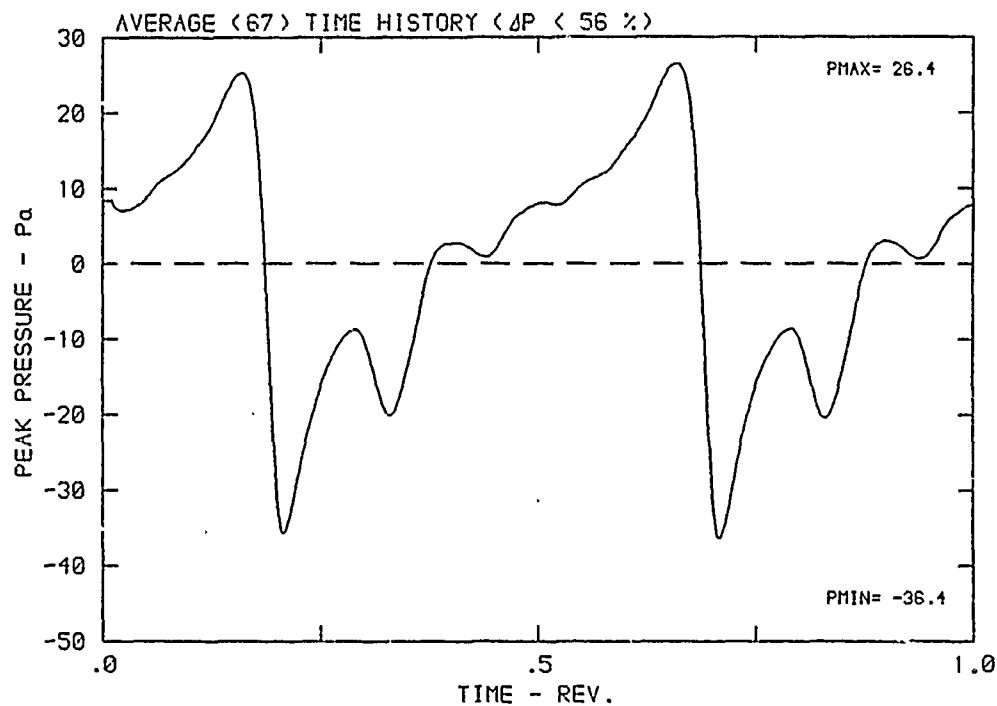
DATA POINT: AN-2    RUN: 64    MP: 5

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 296.5 K



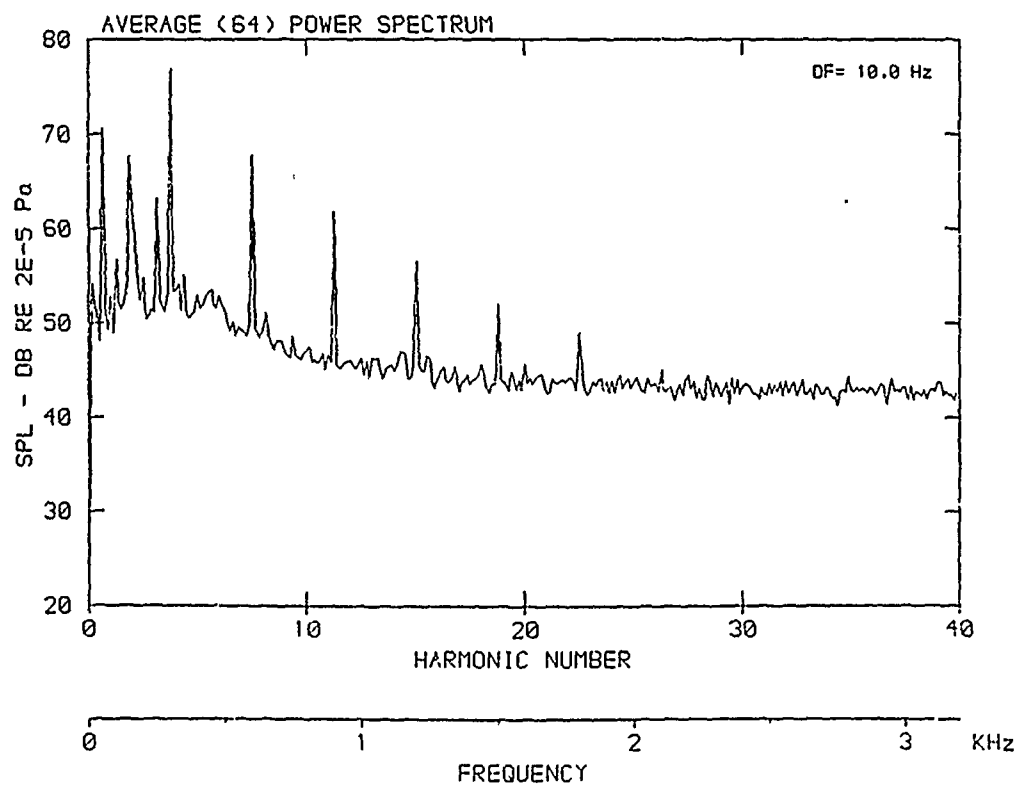
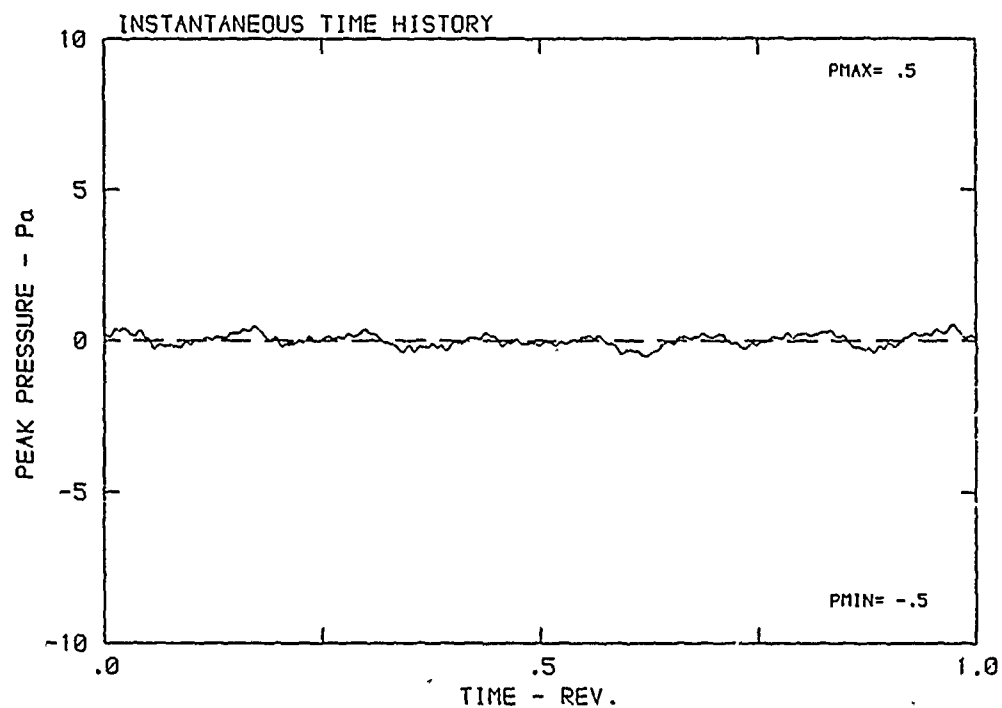
DATA POINT: AN-2    RUN: 64    MP: 5

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



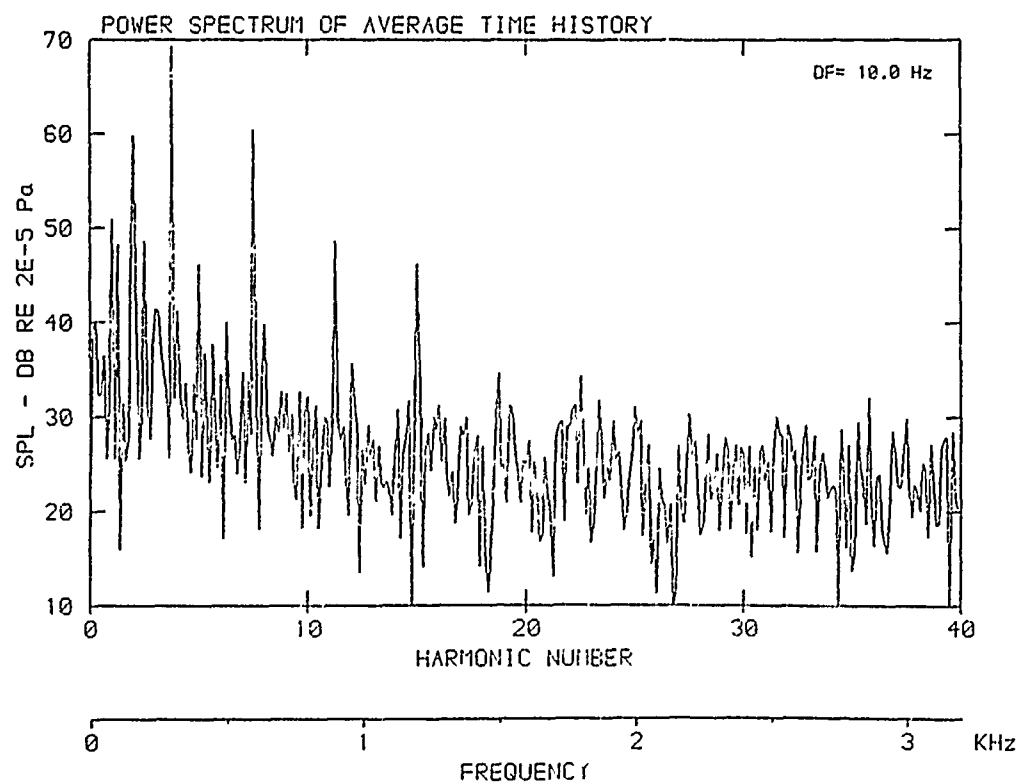
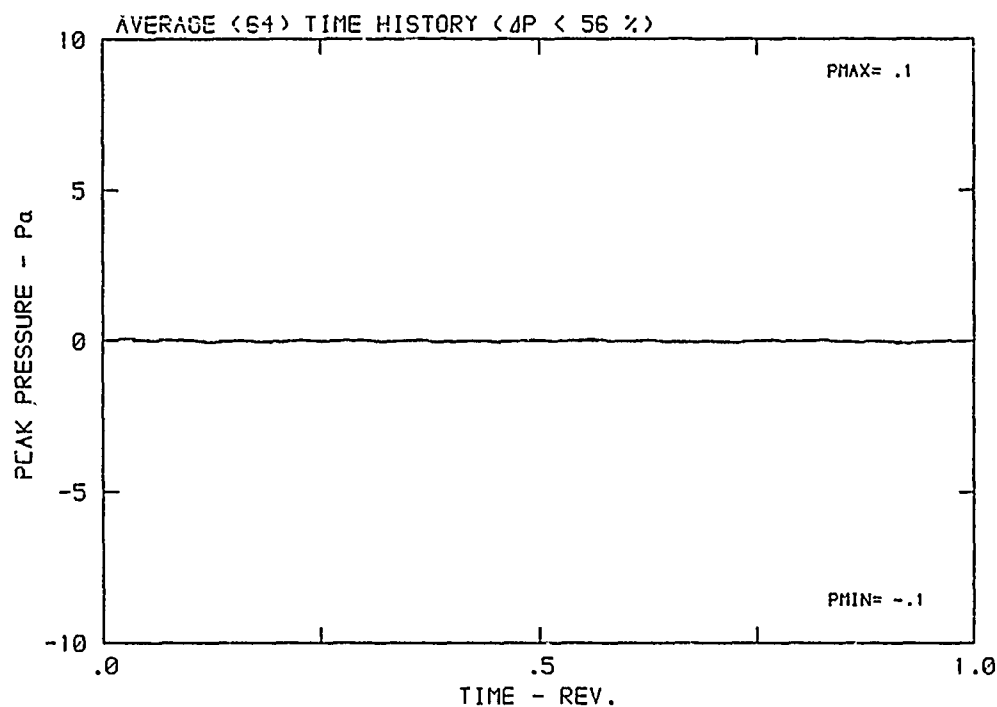
DATA POINT: AN-2    RUN: 64    MP: 6

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



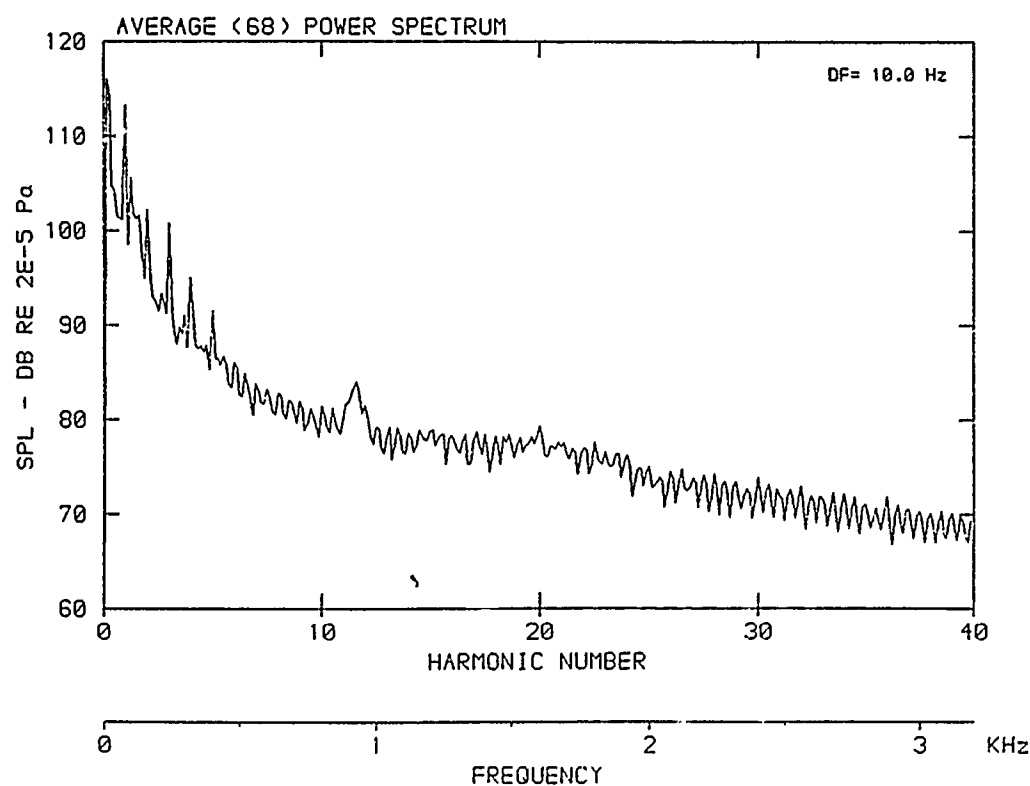
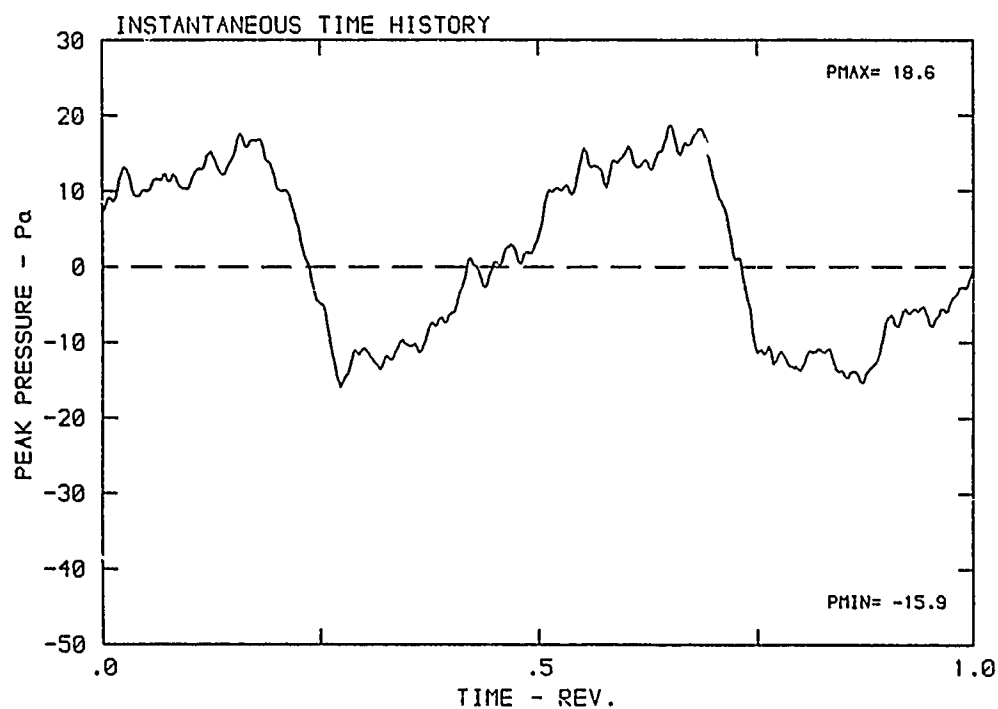
DATA POINT: AN-2    RUN: 64    MP: 6

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



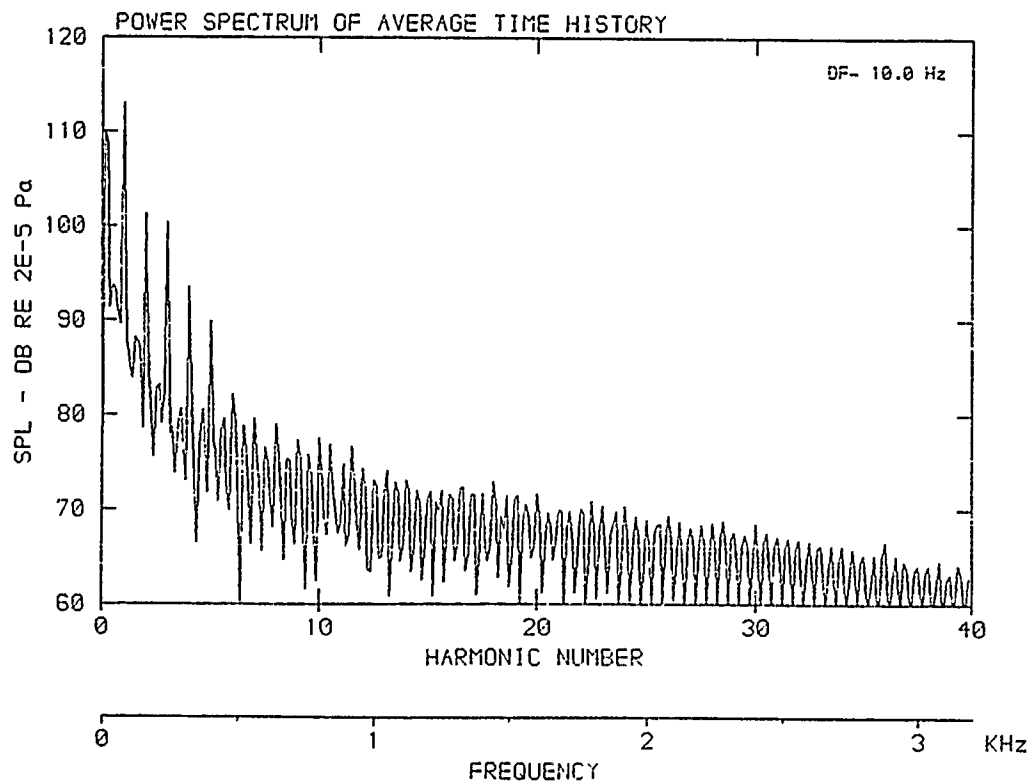
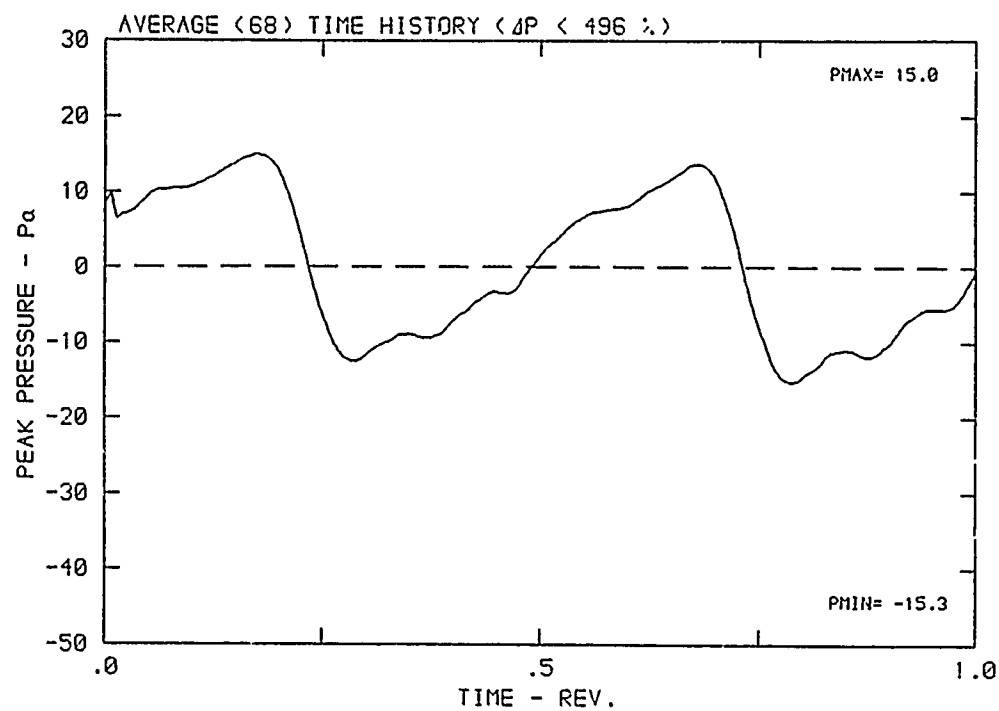
DATA POINT: AN-2    RUN: 64    MP: 7

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



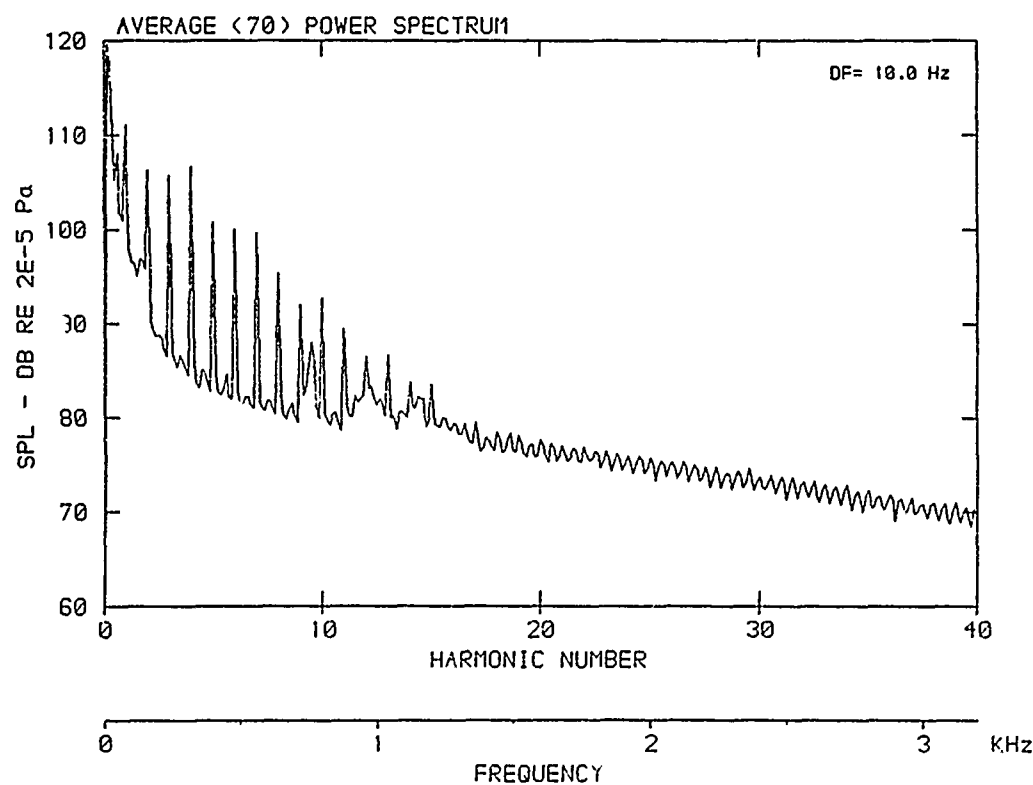
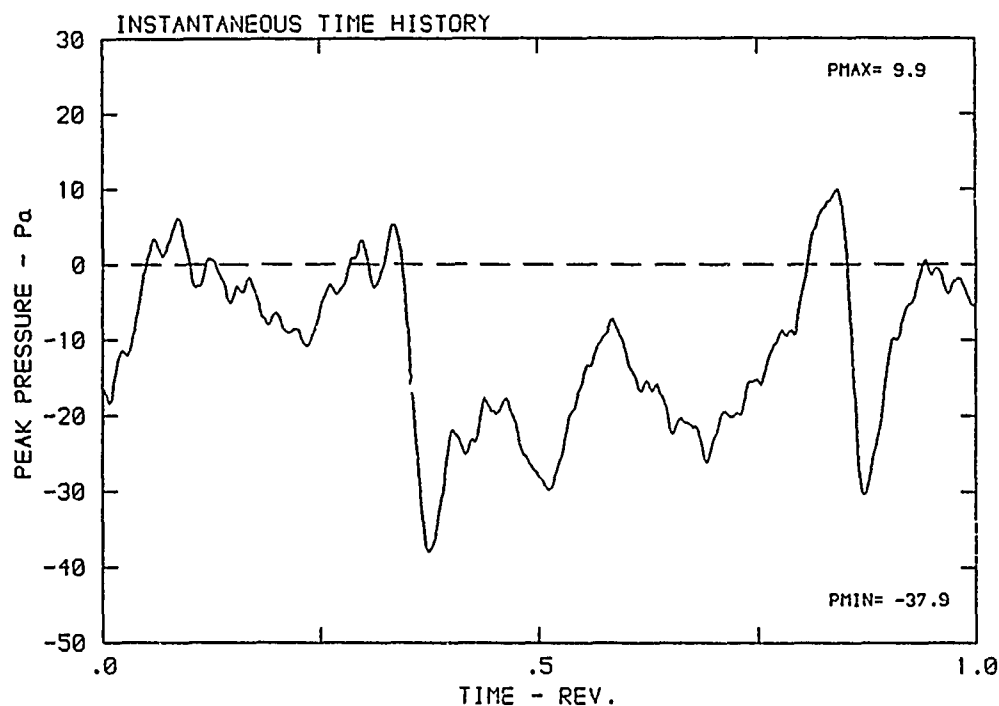
DATA POINT: AN-2 RUN: 64 MP: 7

$\beta$ : 20.8° MH: .7738 n: 2400 rpm v/u: .240  $\phi$ : .0° T: 286.5 K



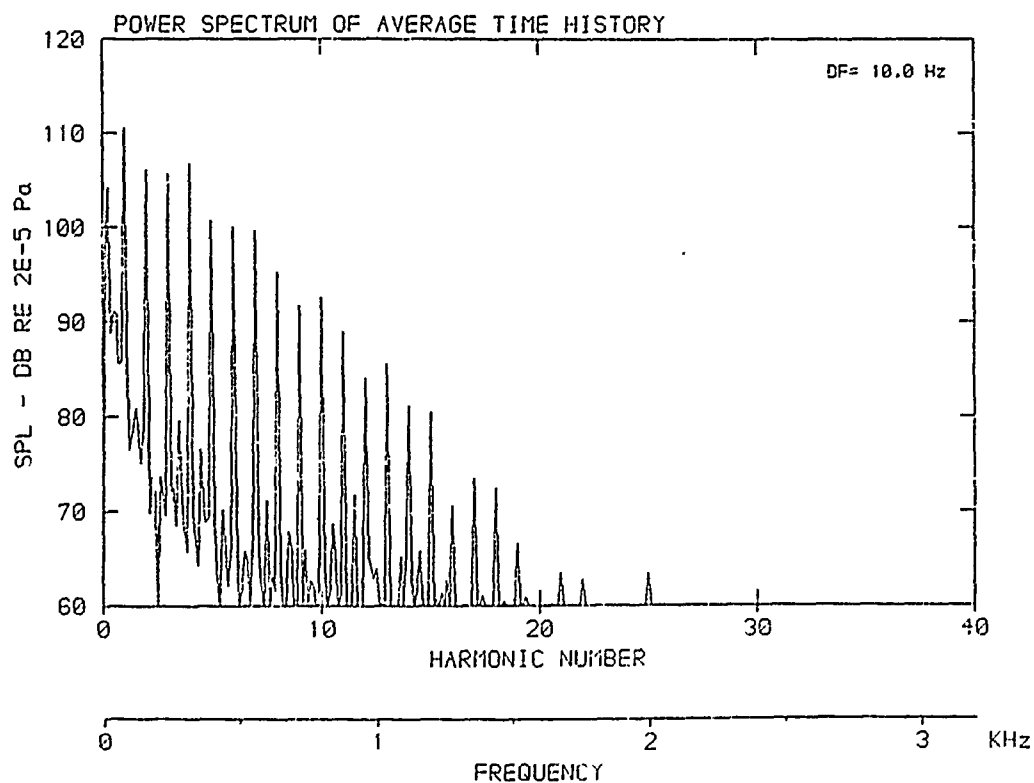
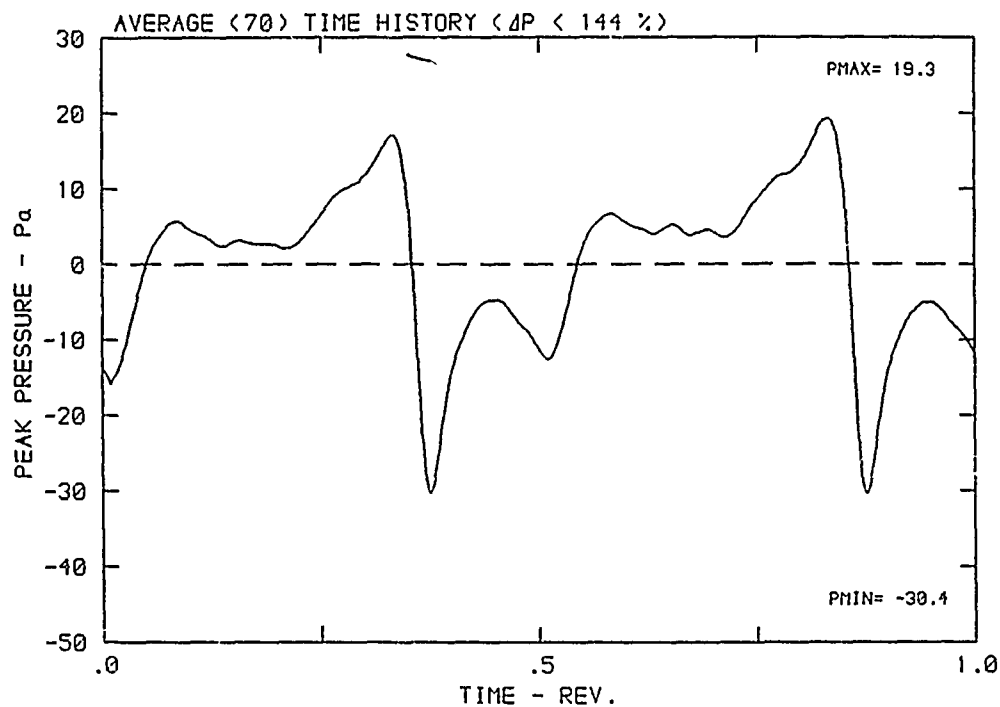
DATA POINT: AN-2    RUN: 64    MP: 9

$\beta$ : 20.8°    MH: .7738    n: 2400 rpm    v/u: .240     $\phi$ : .0°    T: 286.5 K



DATA POINT: AN-2 RUN: 64 MP: 9

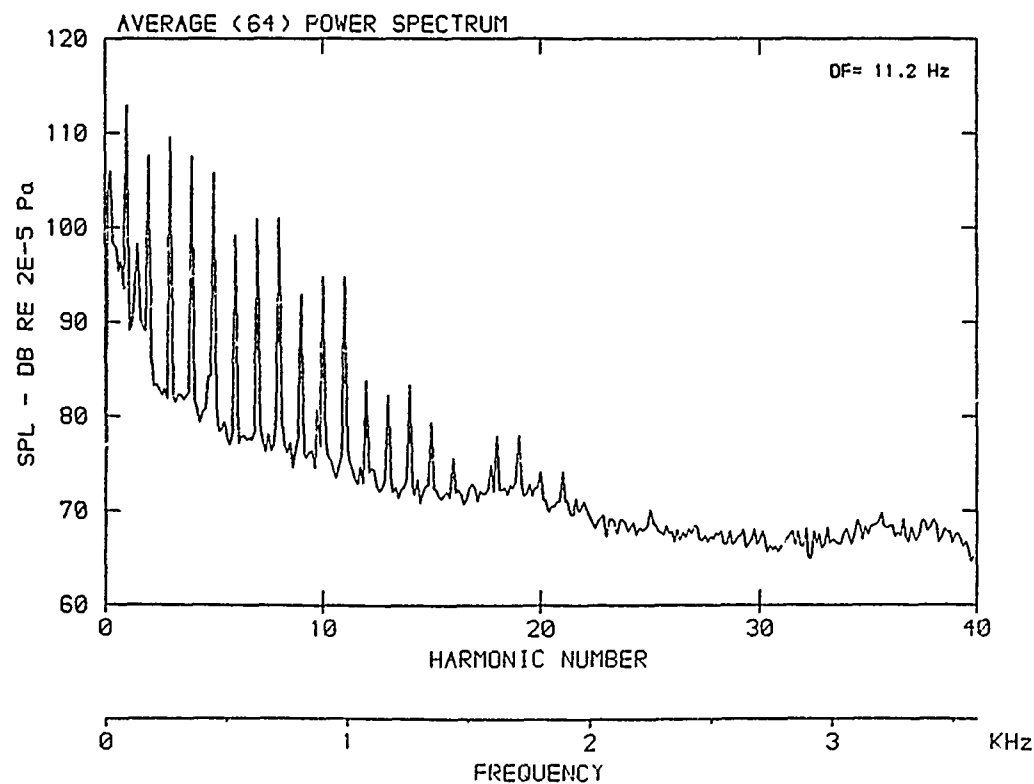
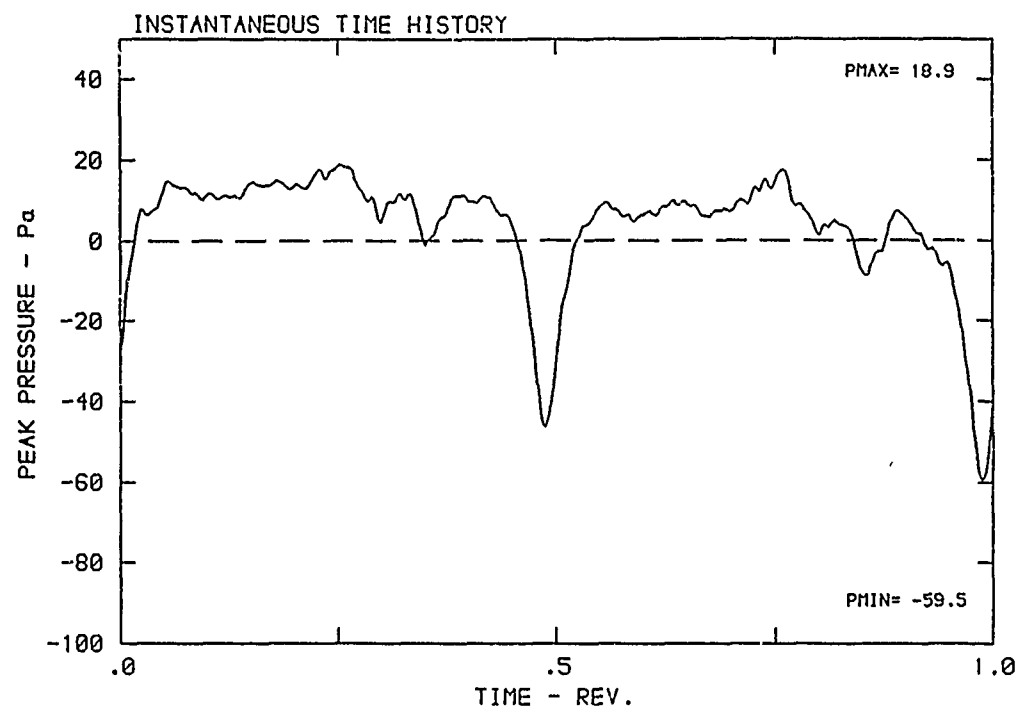
$\beta$ : 20.8° MH: .7738 n: 2400 rpm v/u: .240  $\phi$ : .0° T: 286.5 K





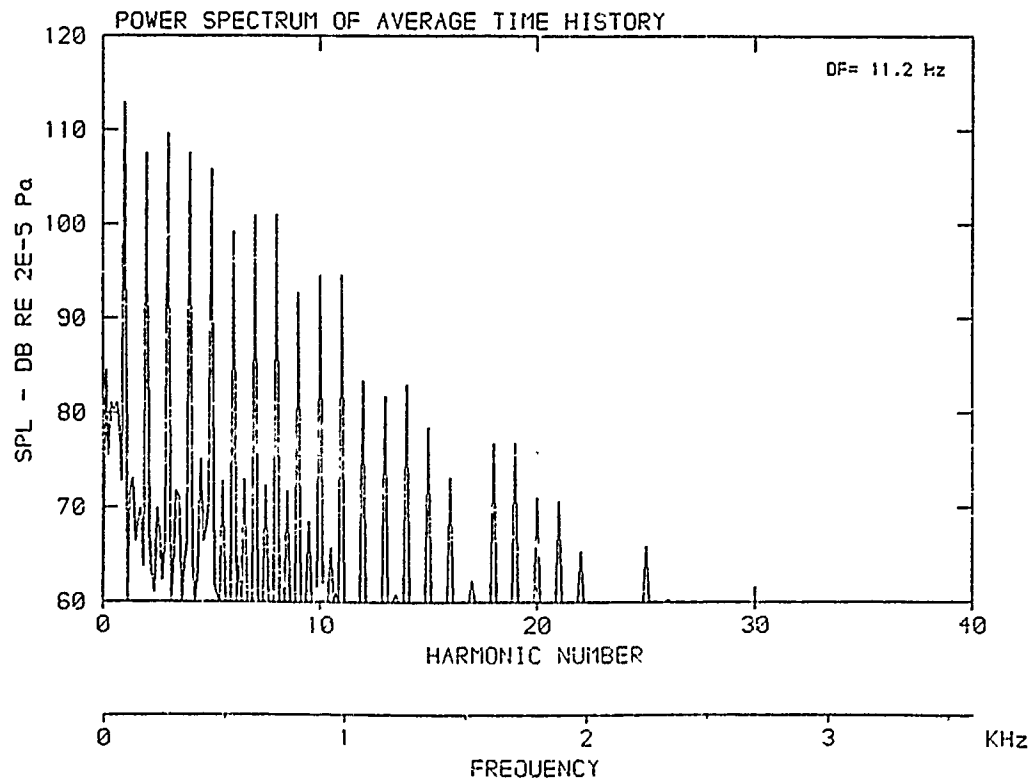
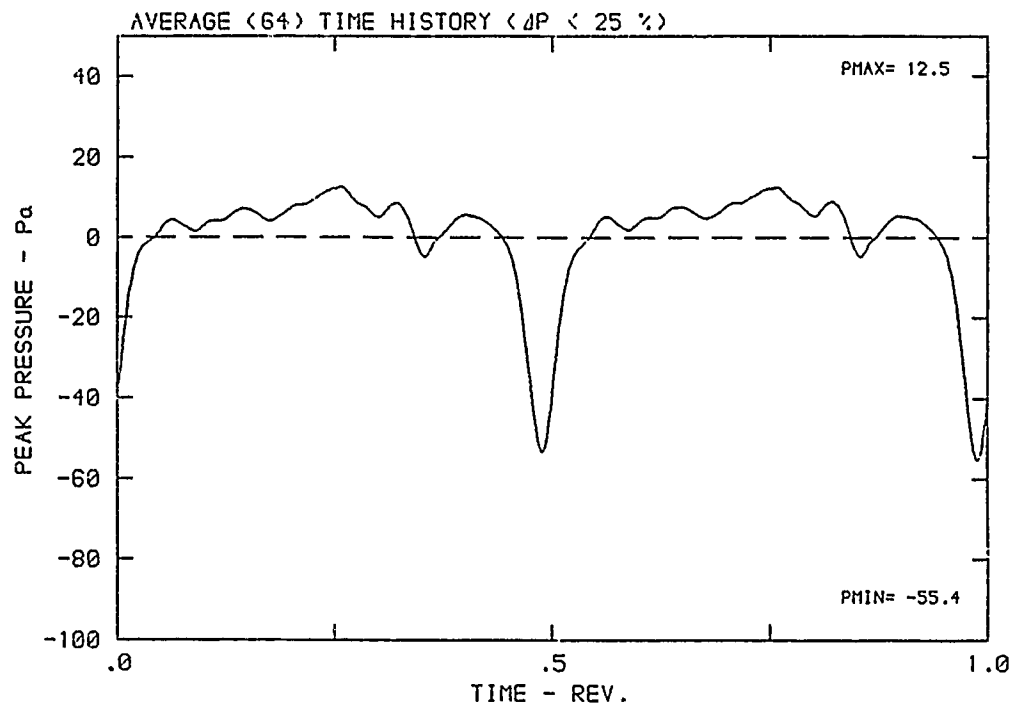
DATA POINT: AN-3 RUN: 65 MP: 1

$\beta$ : 20.8° MH: .8688 n: 2700 rpm v/u: .242  $\phi$ : .0° T: 287.9 K



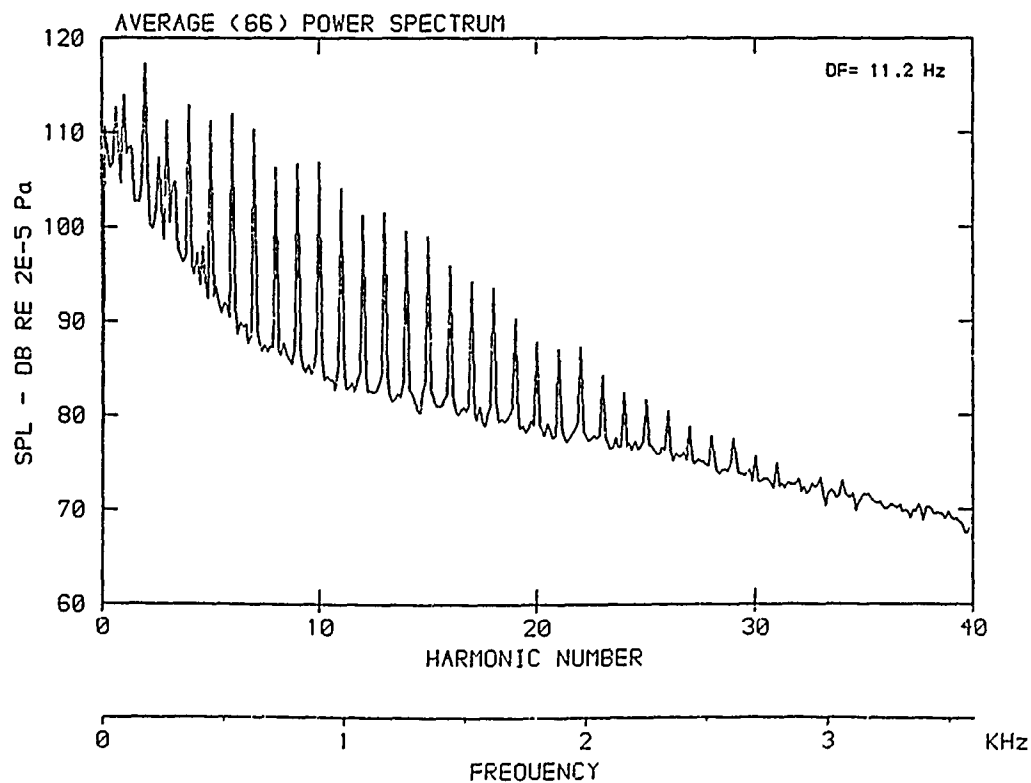
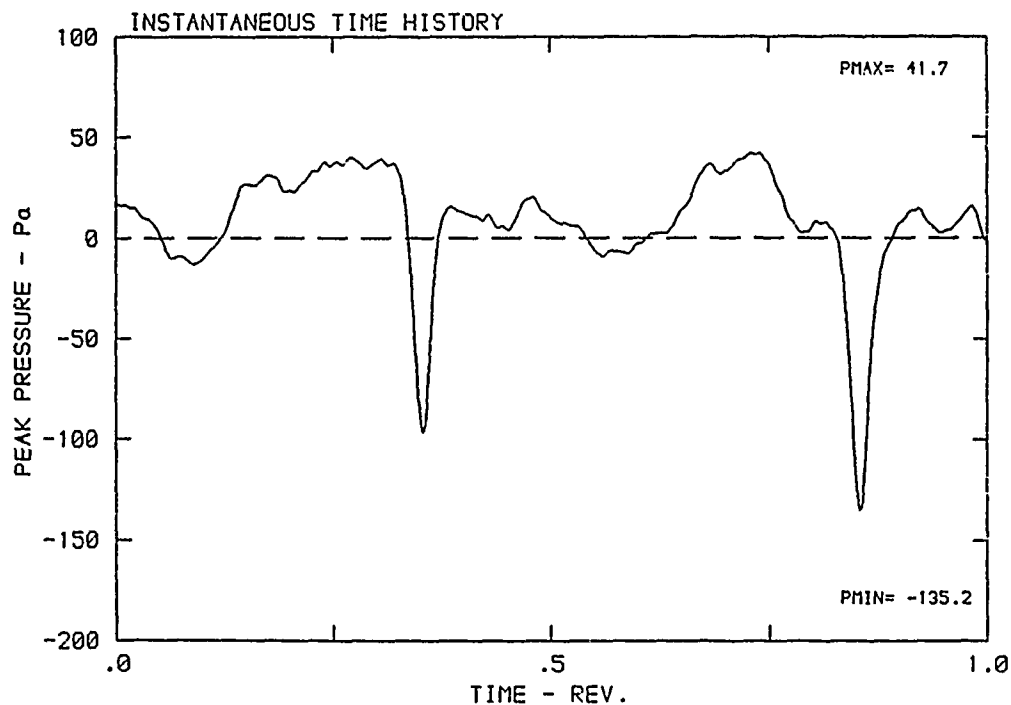
DATA POINT: AN-3      RUN: 65      MP: 1

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



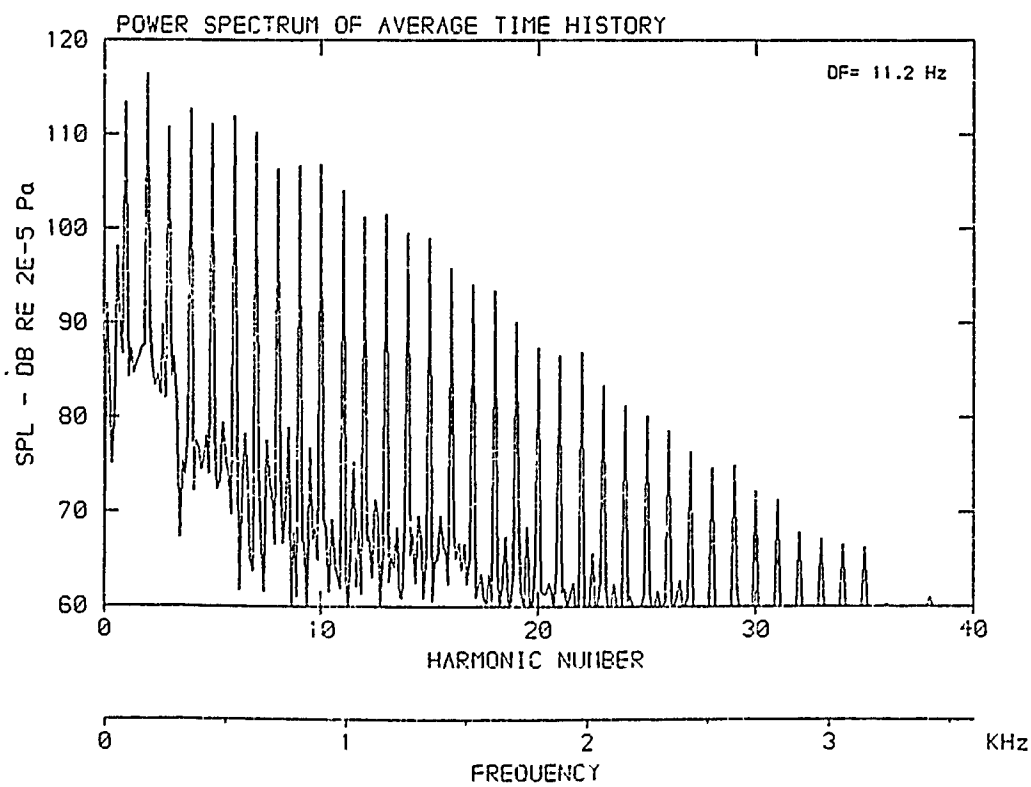
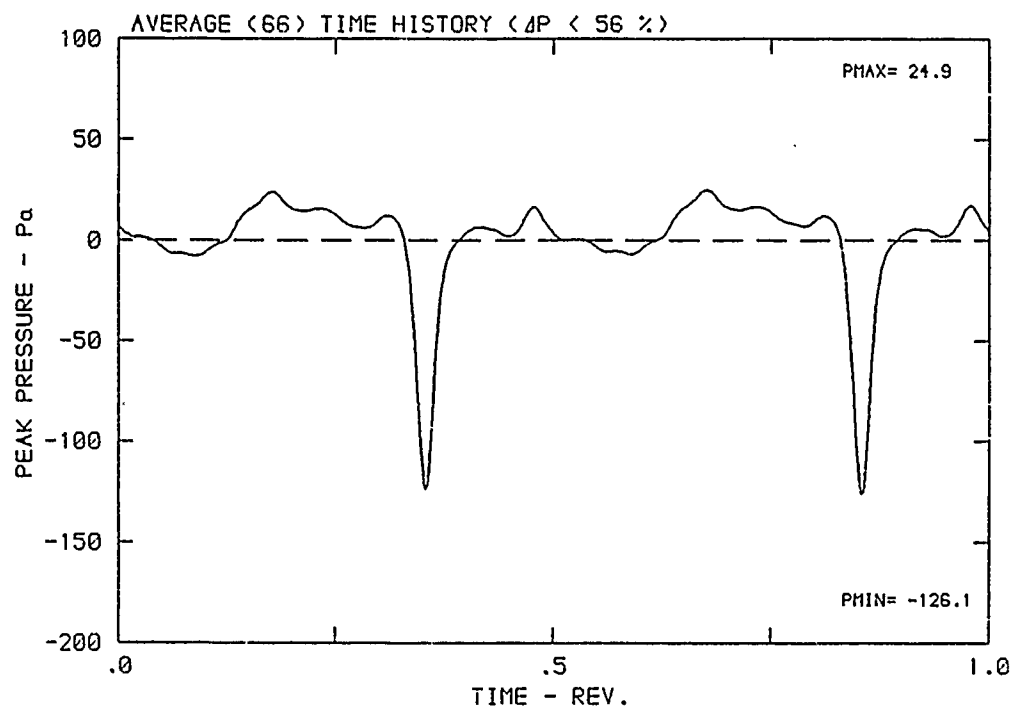
DATA POINT: AN-3      RUN: 65      MP: 2

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



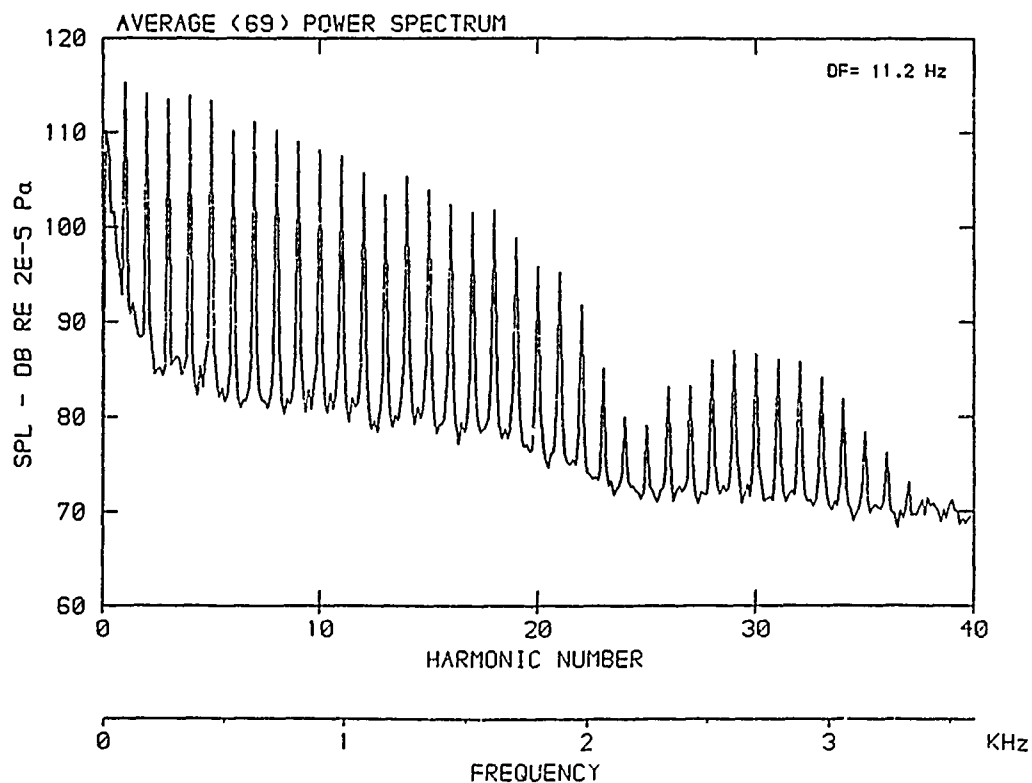
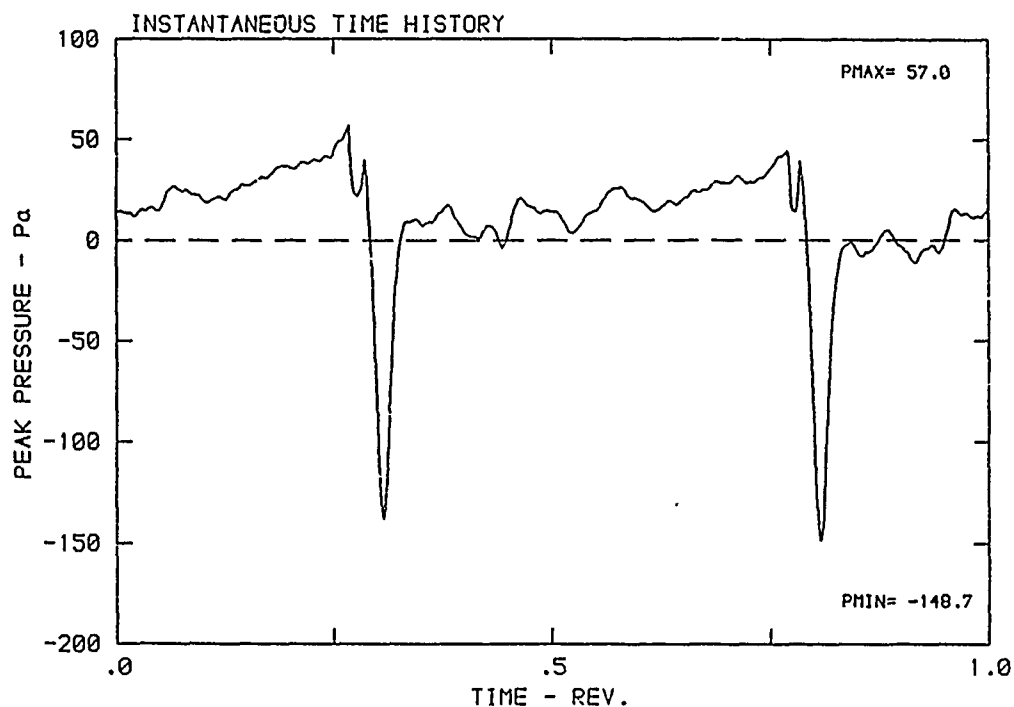
DATA POINT: AN-3      RUN: 65      MP: 2

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



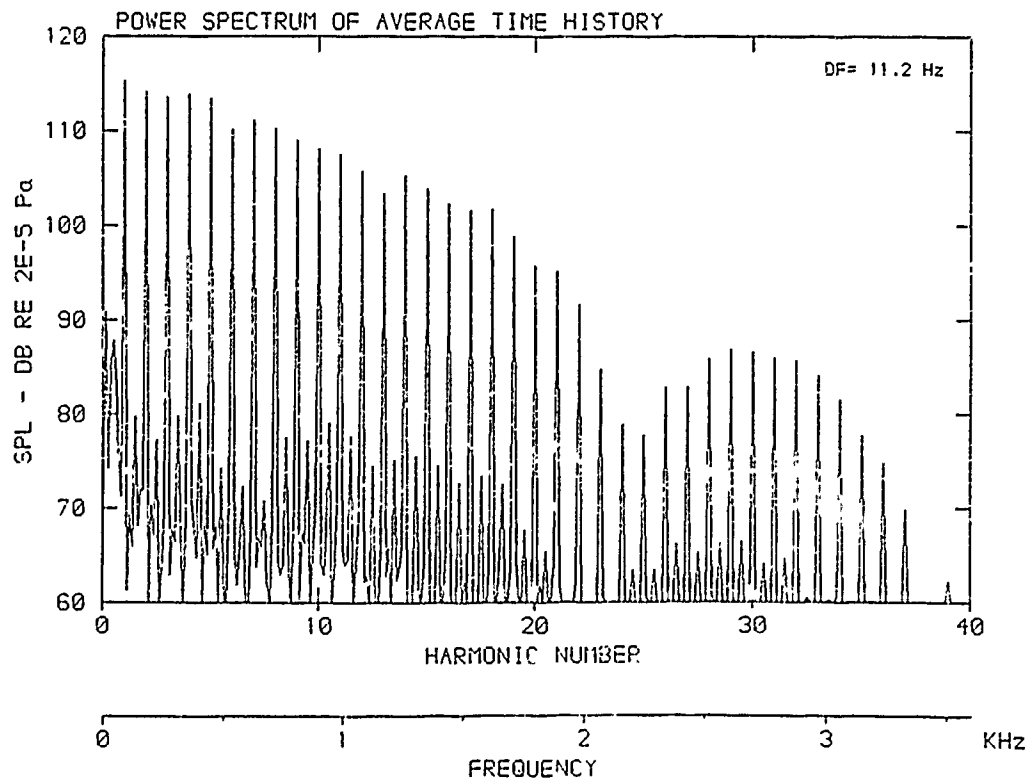
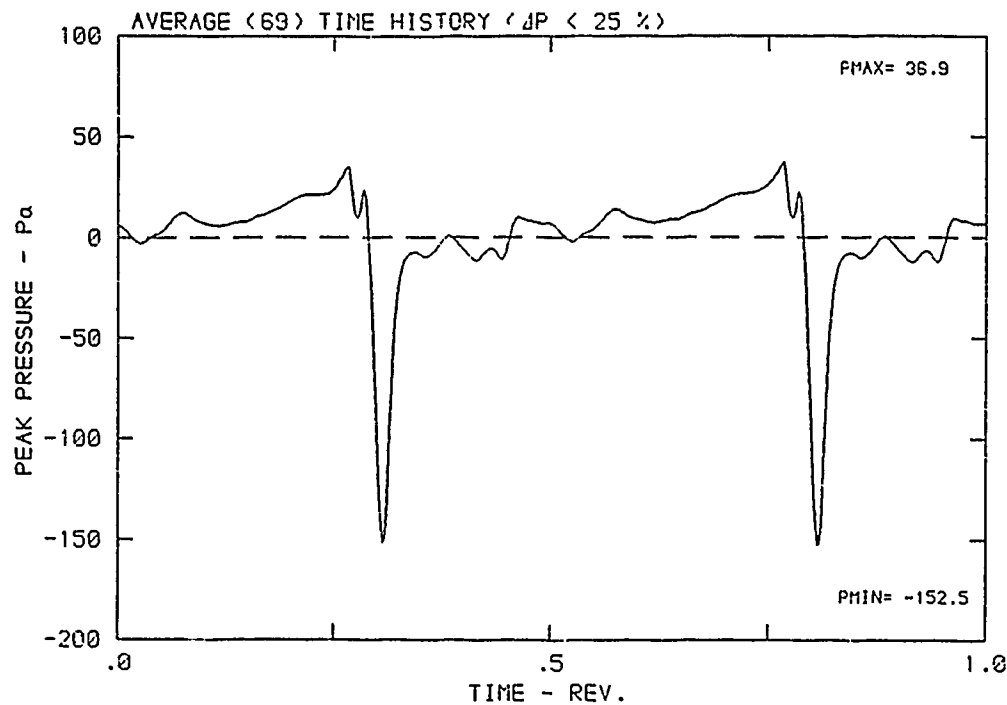
DATA POINT: AN-3      RUN: 65      MP: 3

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



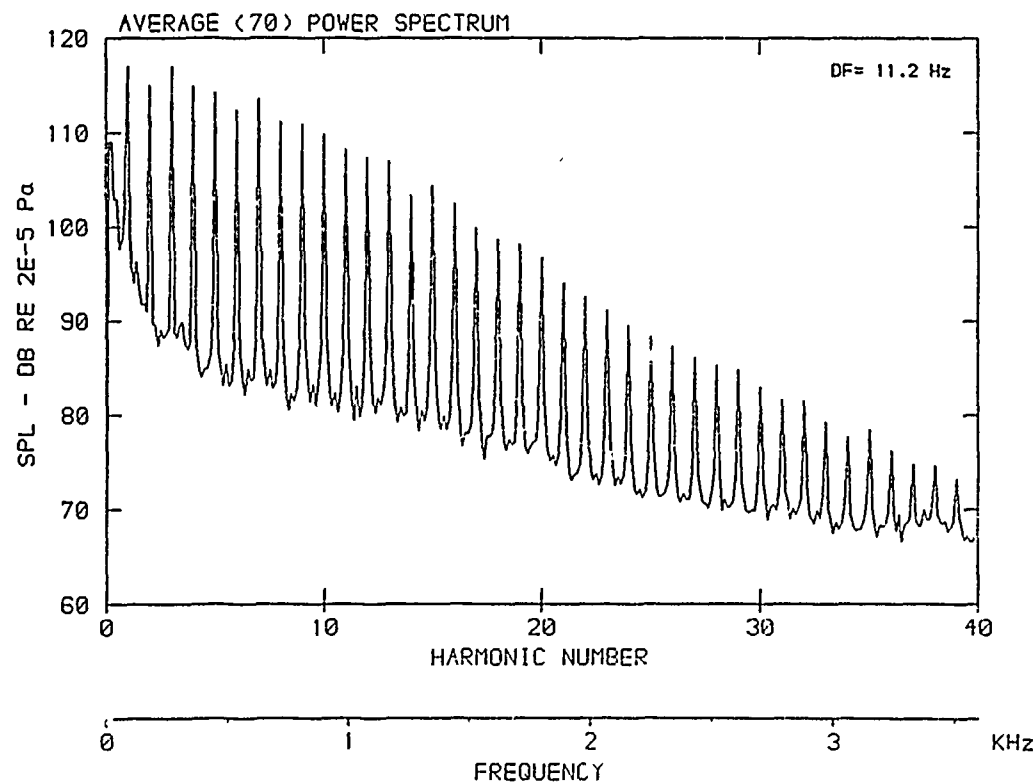
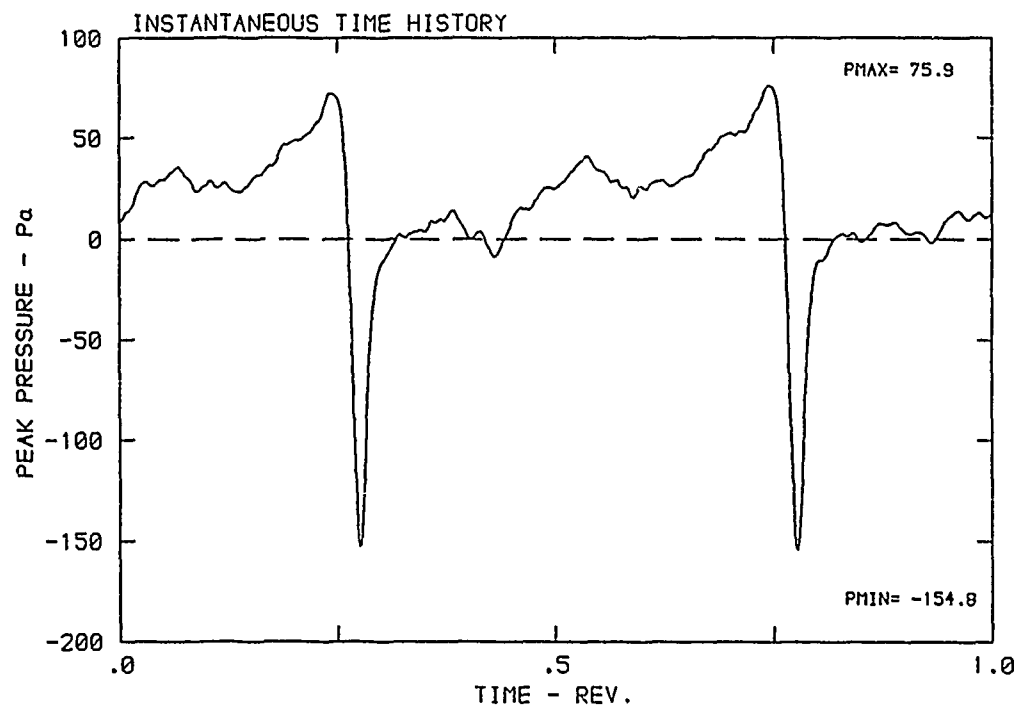
DATA POINT: AN-3    RUN: 65    MP: 3

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



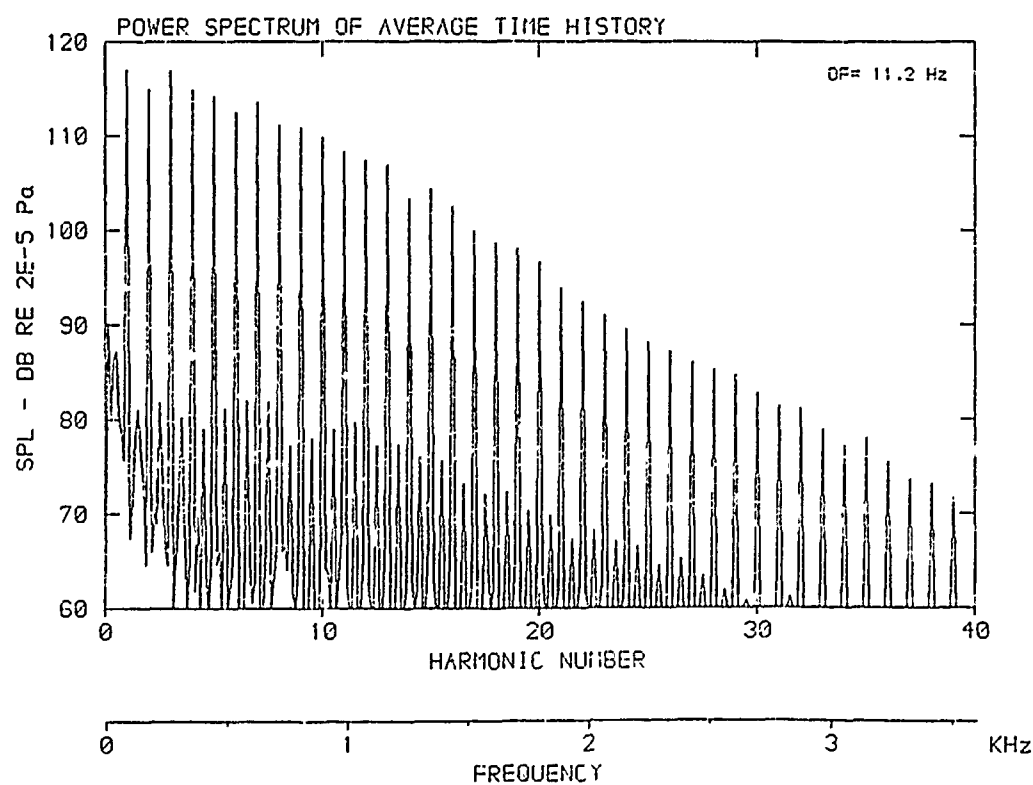
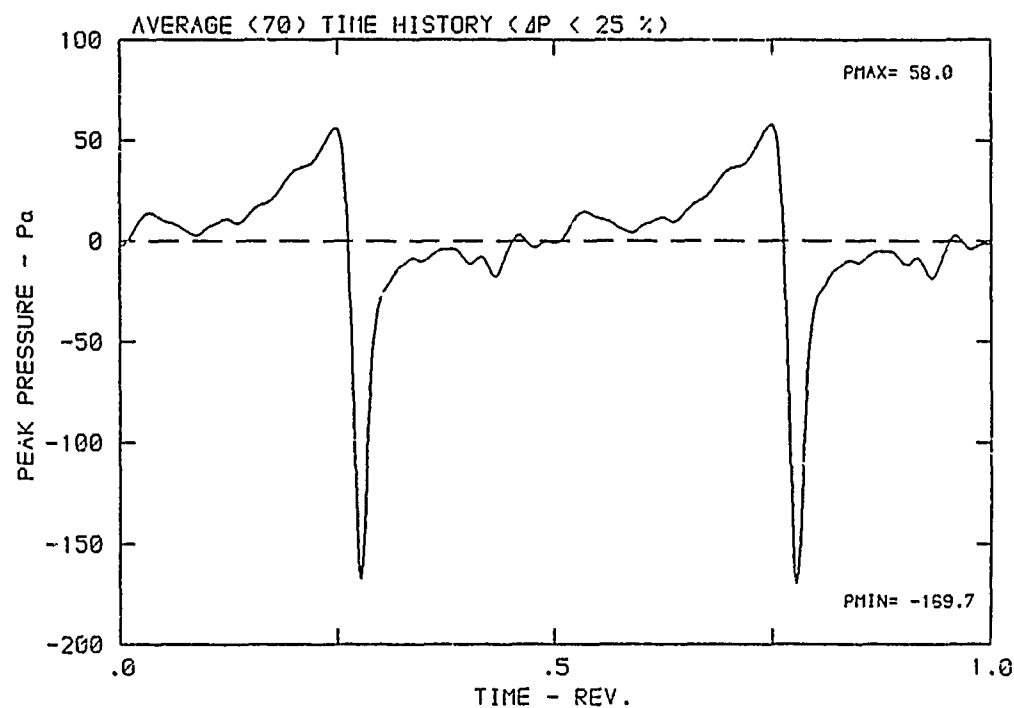
DATA POINT: AN-3    RUN: 65    MP: 4

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



DATA POINT: AN-3    RUN: 65    MP: 4

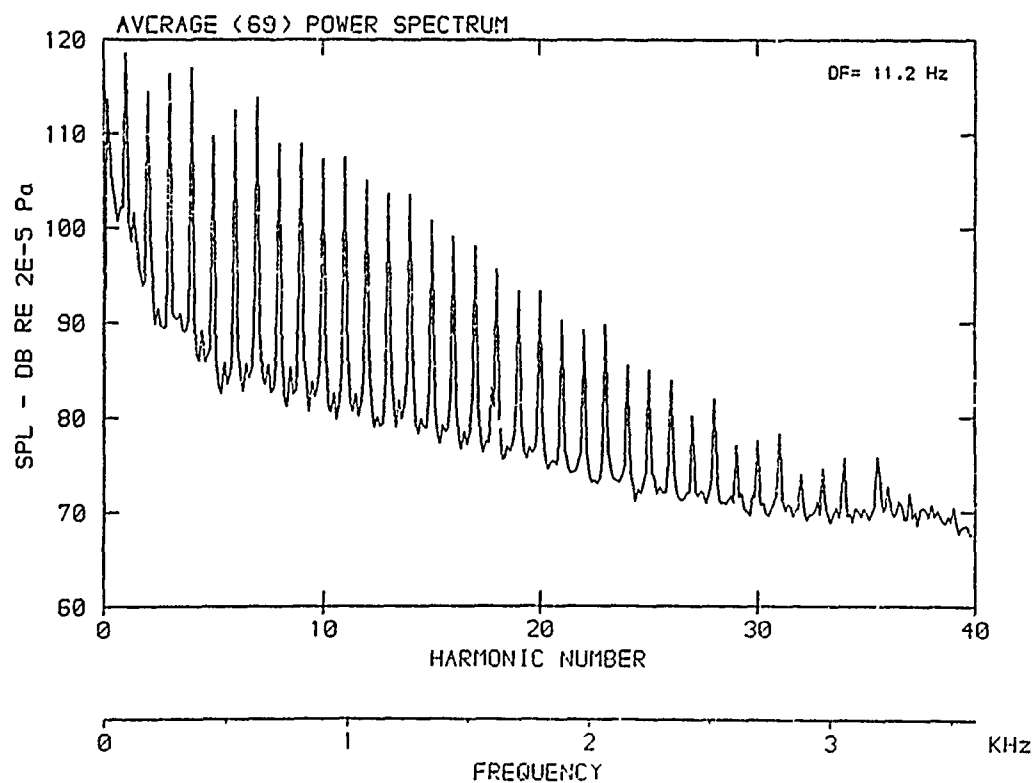
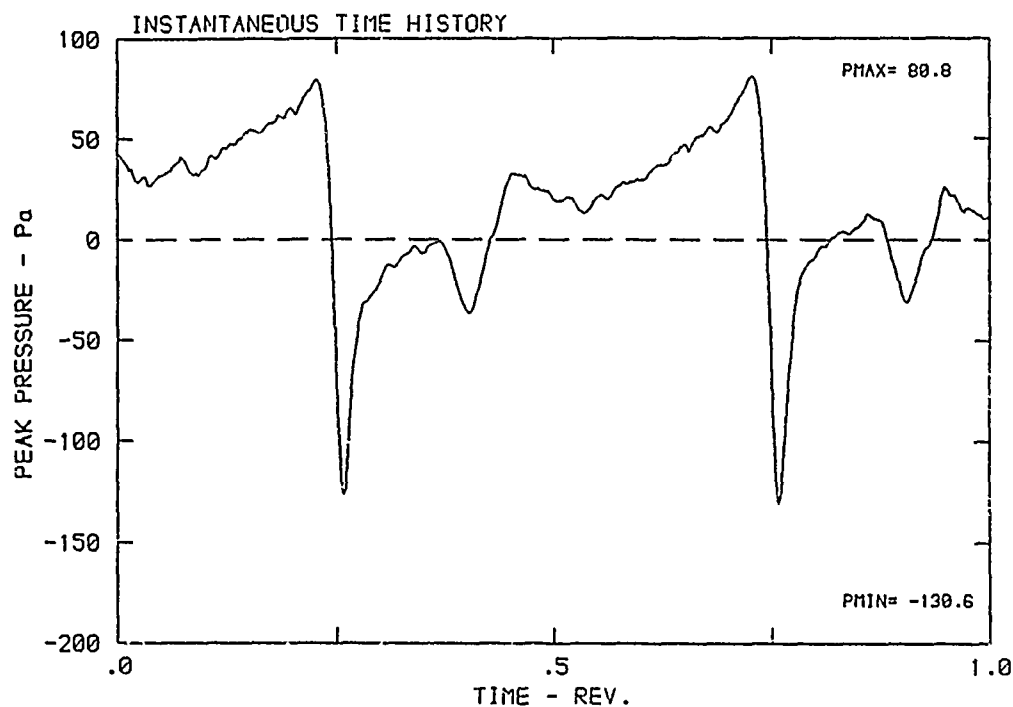
$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K





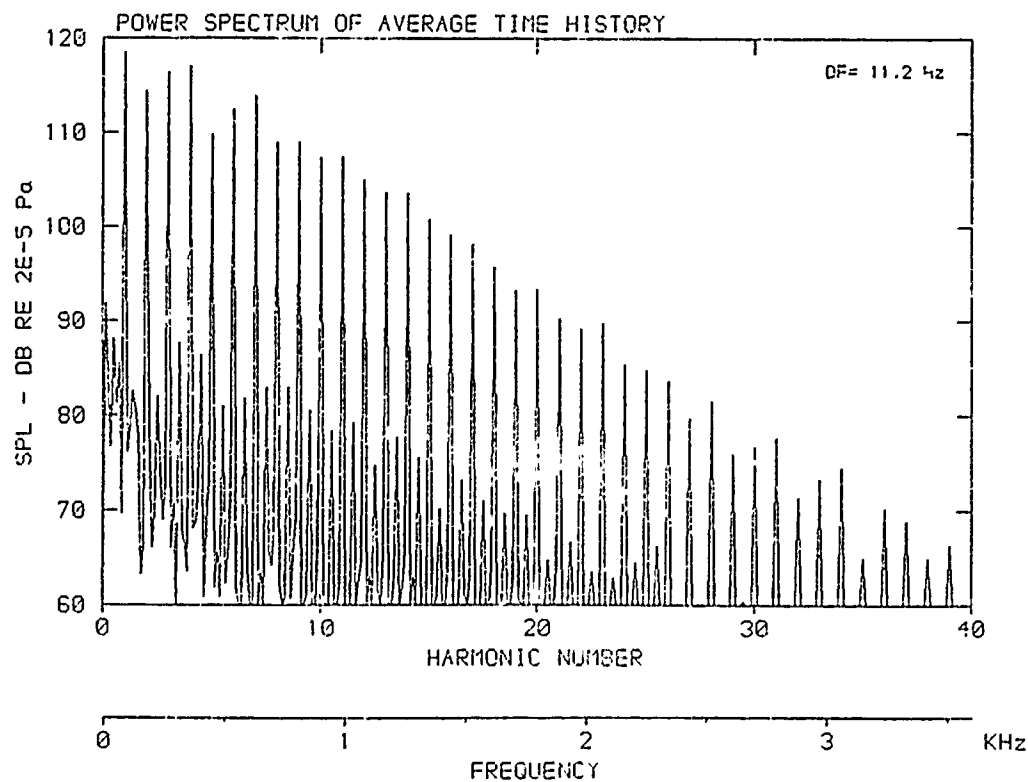
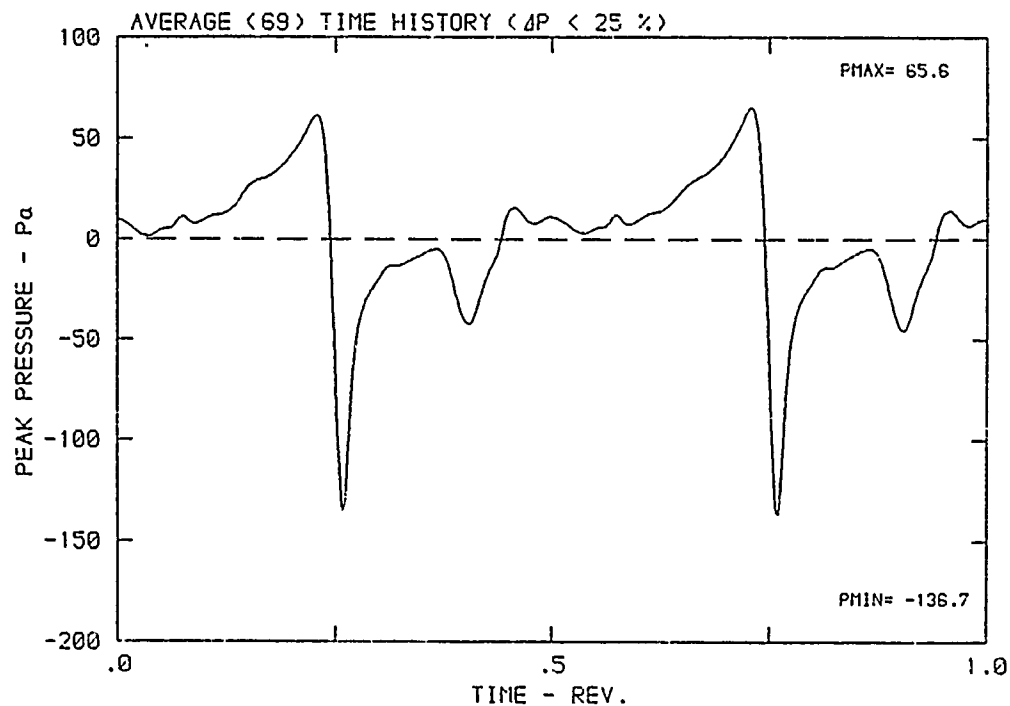
DATA POINT: AN-3      RUN: 65      MP: 5

$\beta$ :  $20.8^\circ$     MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ :  $.0^\circ$     T: 287.9 K



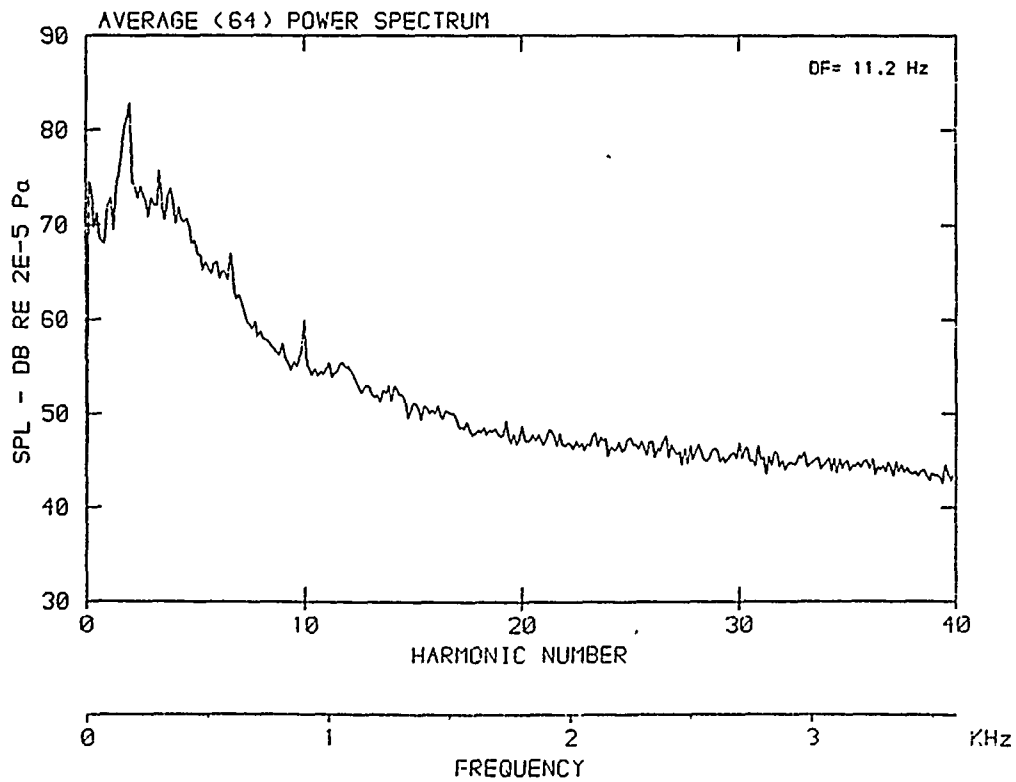
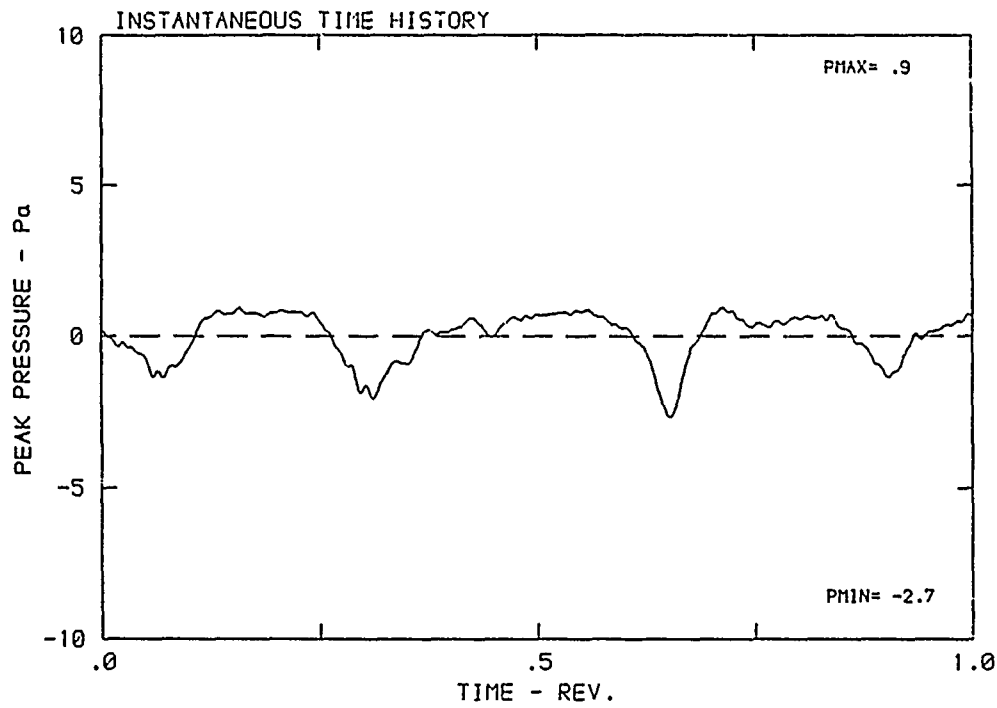
DATA POINT: AN-3      RUN: 65      MP: 5

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



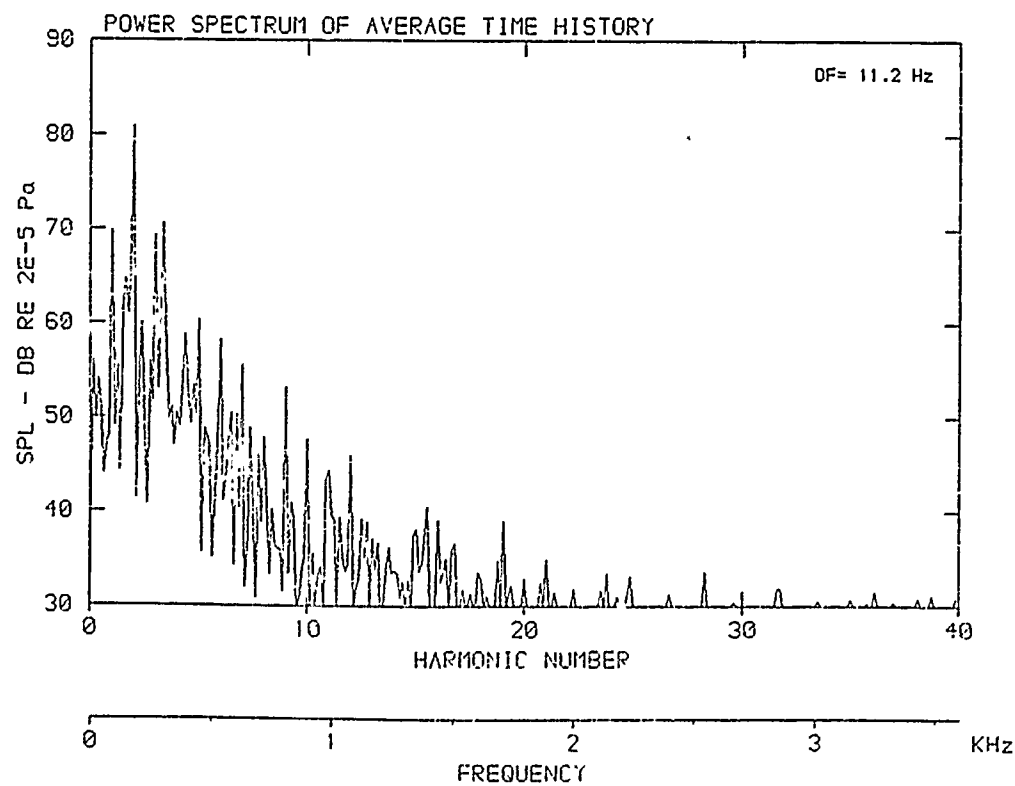
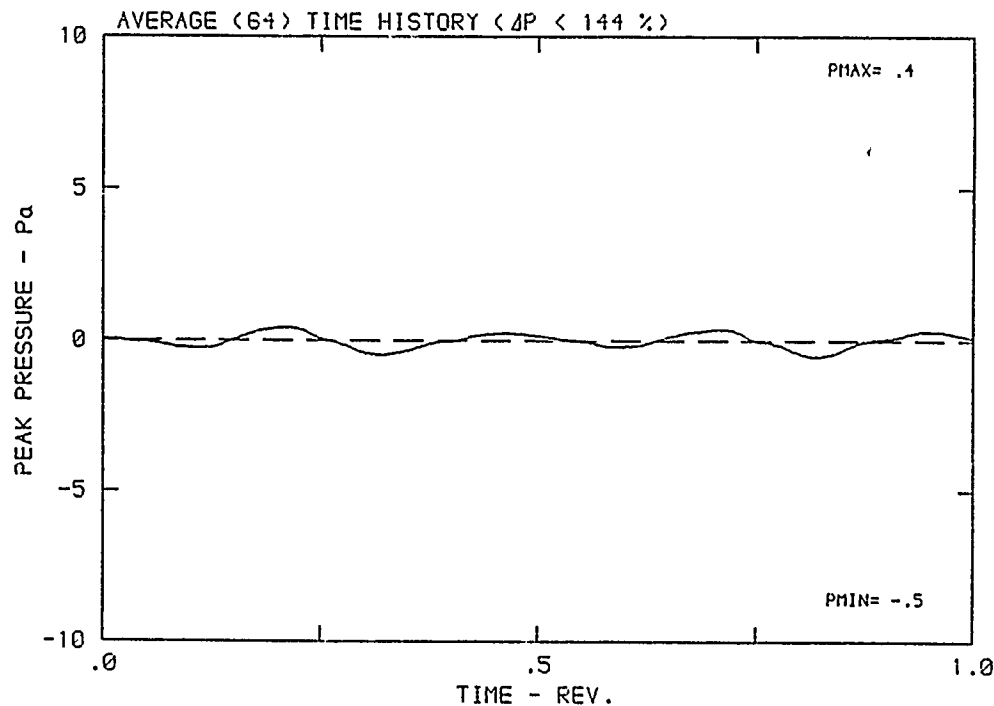
DATA POINT: AN-3    RUN: 65    MP: 6

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



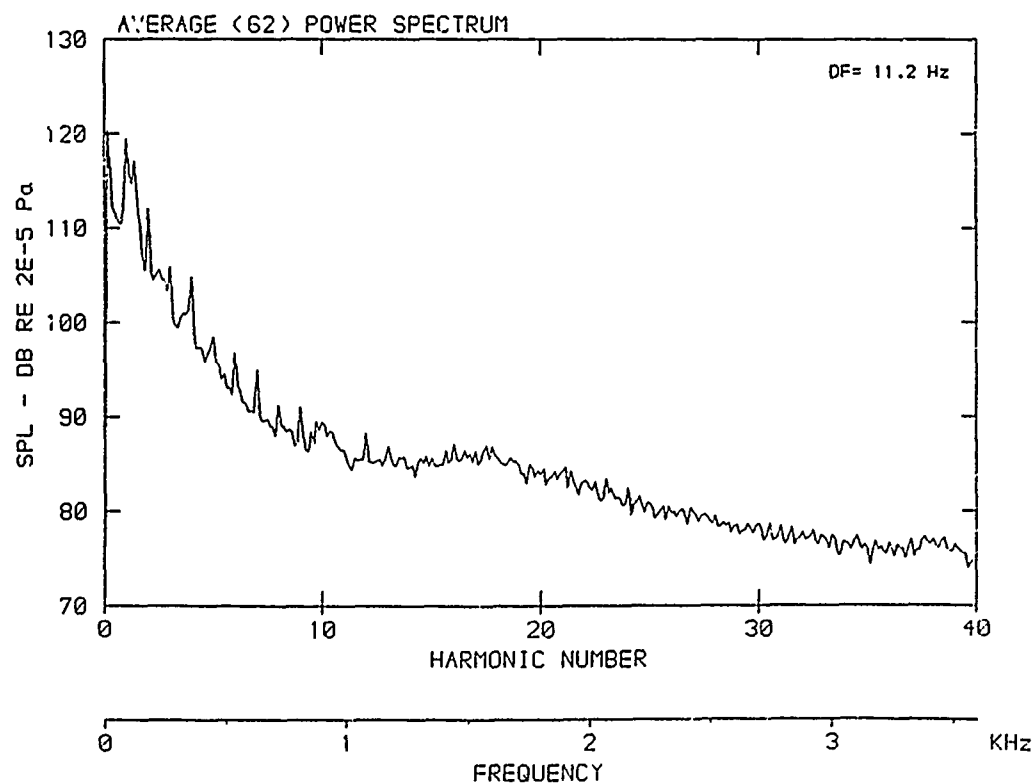
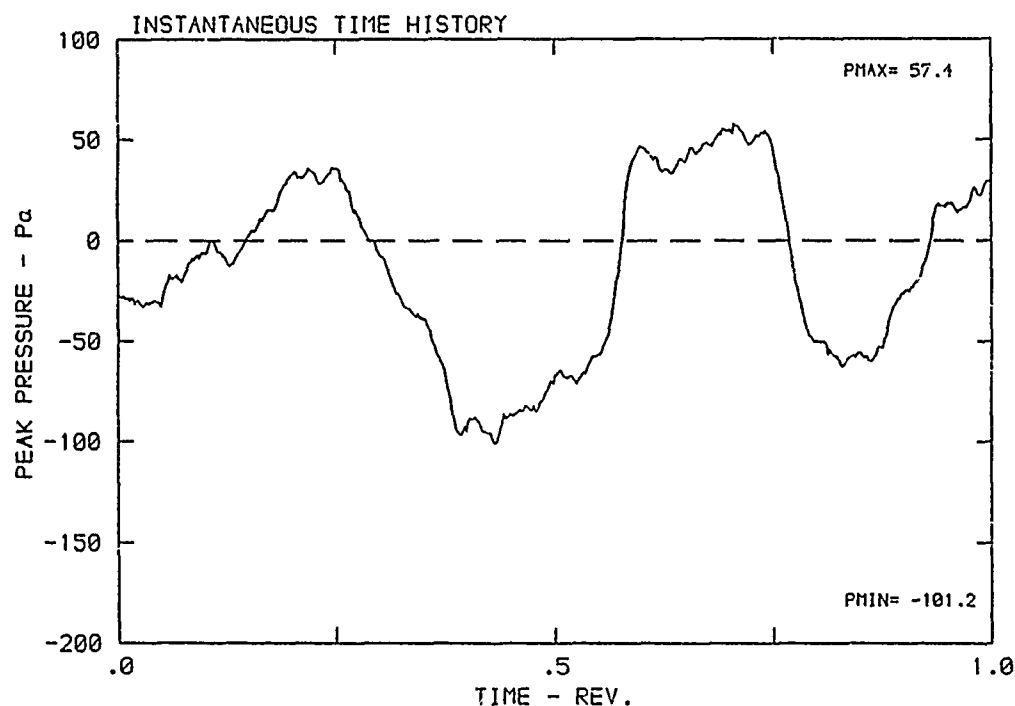
DATA POINT: AN-3    RUN: 65    MP: 6

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm     $v/u$ : .242     $\phi$ : .0°    T: 287.9 K



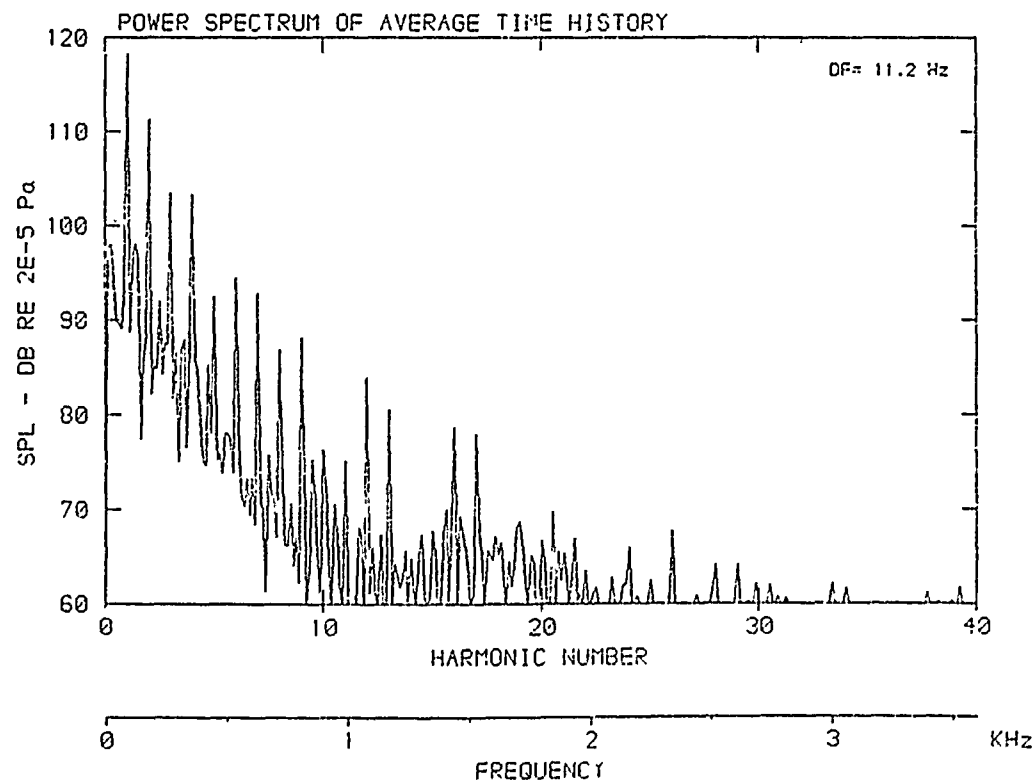
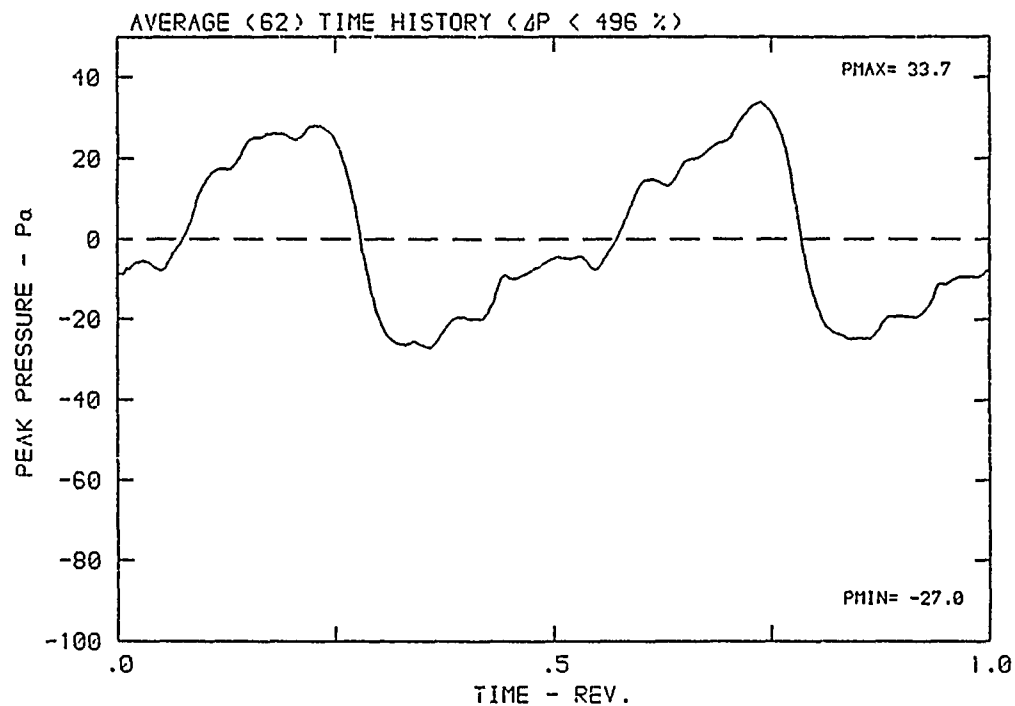
DATA POINT: AN-3    RUN: 65    MP: 7

$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K



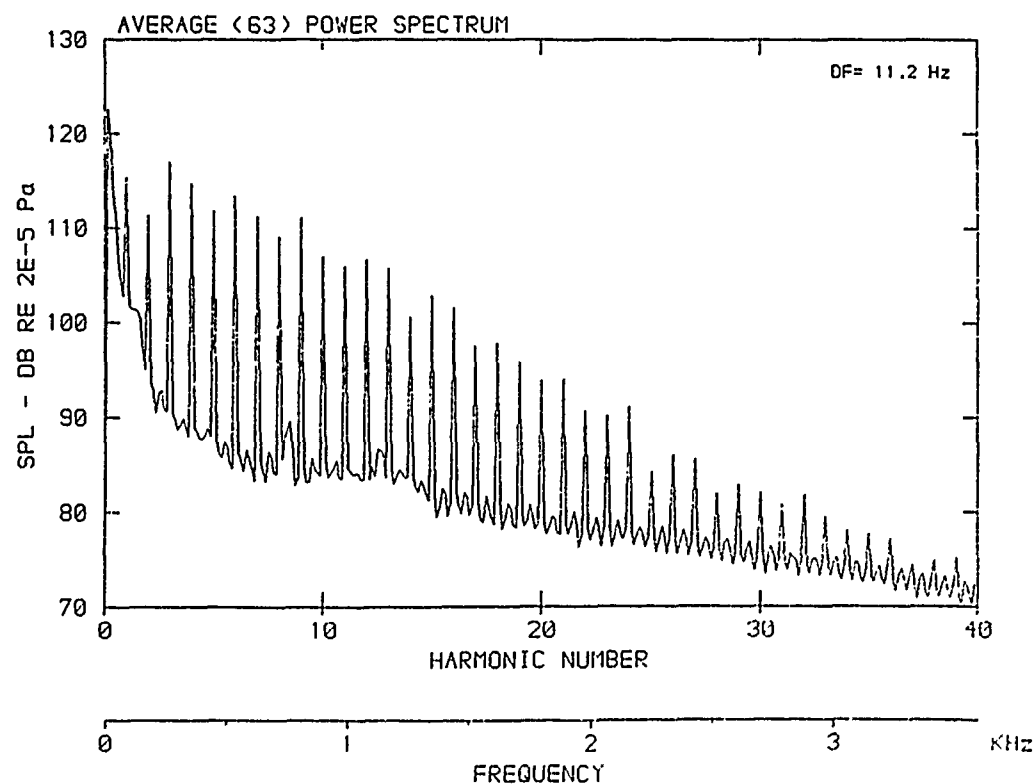
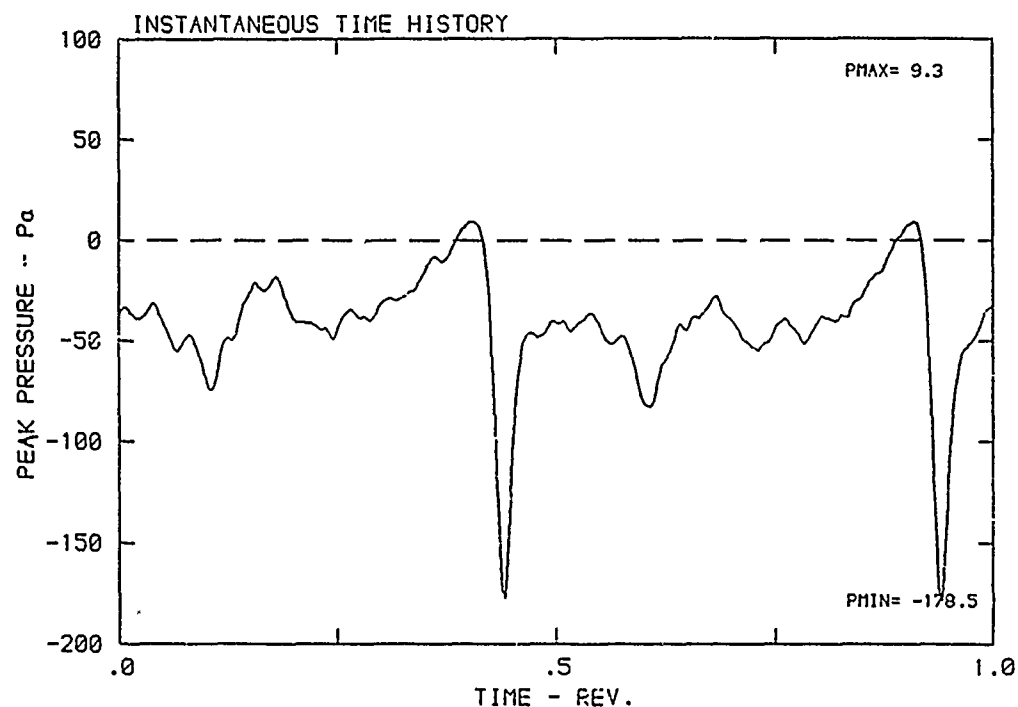
DATA POINT: AN-3      RUN: 65      MP: 7

$\beta$ : 20.8°     $MII$ : .8688     $n$ : 2700 rpm     $v/u$ : .242     $\phi$ : .0°     $T$ : 287.9 K



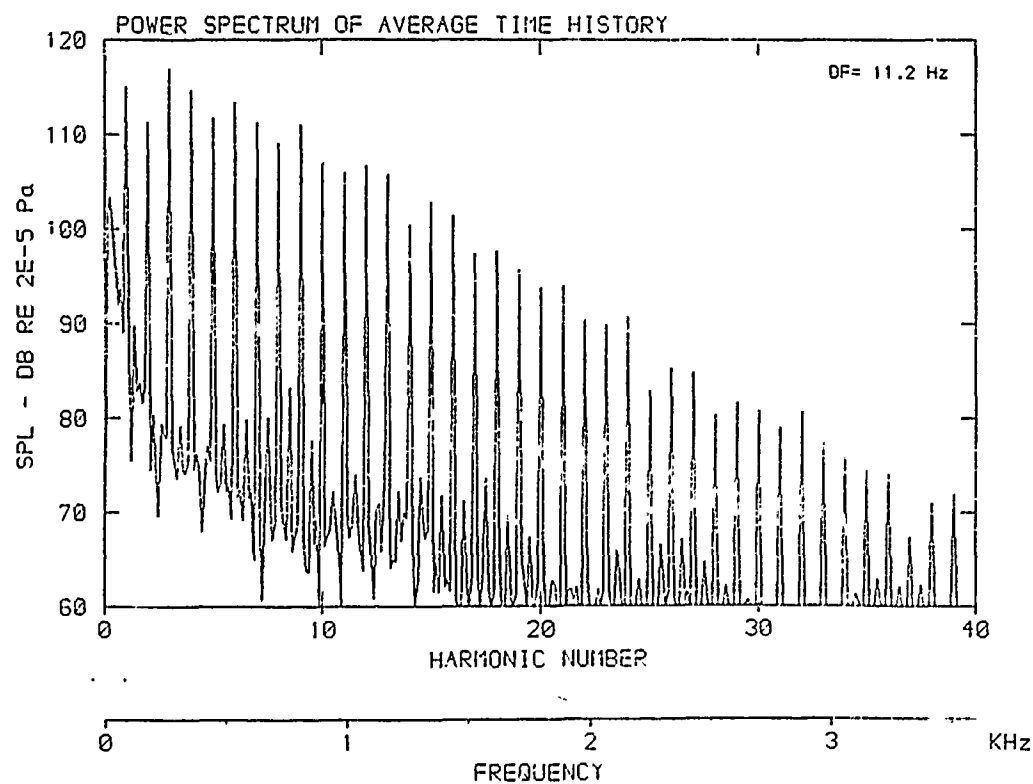
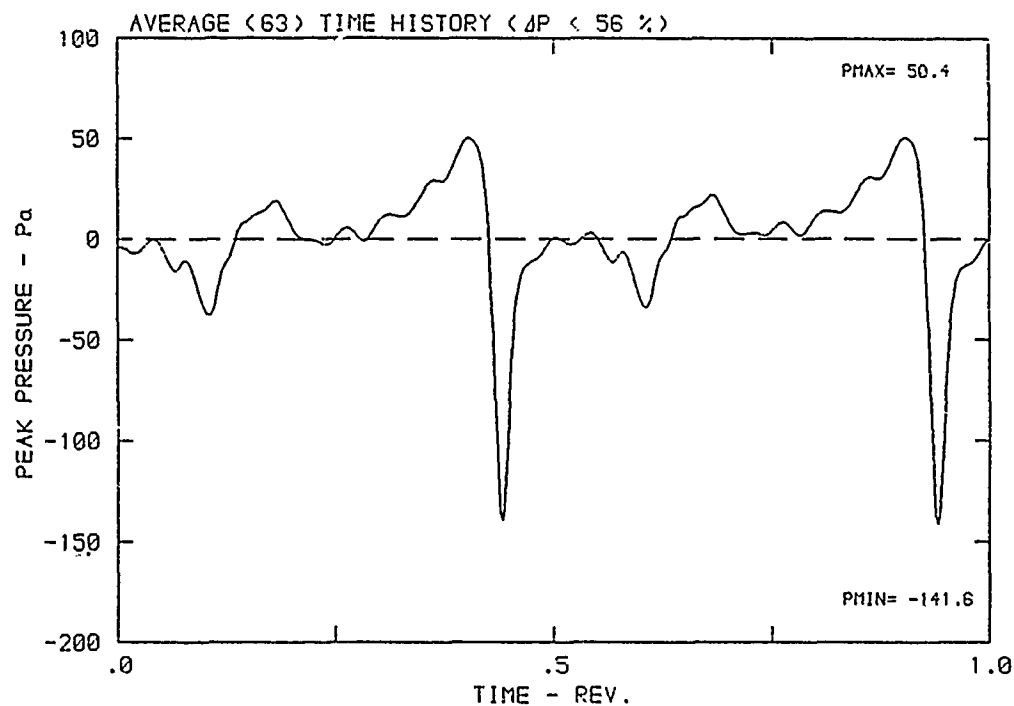
DATA POINT: AN-3 RUN: 65 MP: 9

$\beta$ : 20.8° MH: .8688 n: 2700 rpm v/u: .242  $\phi$ : .0° T: 287.9 K



DATA POINT: AN-3    RUN: 65    MP: 9

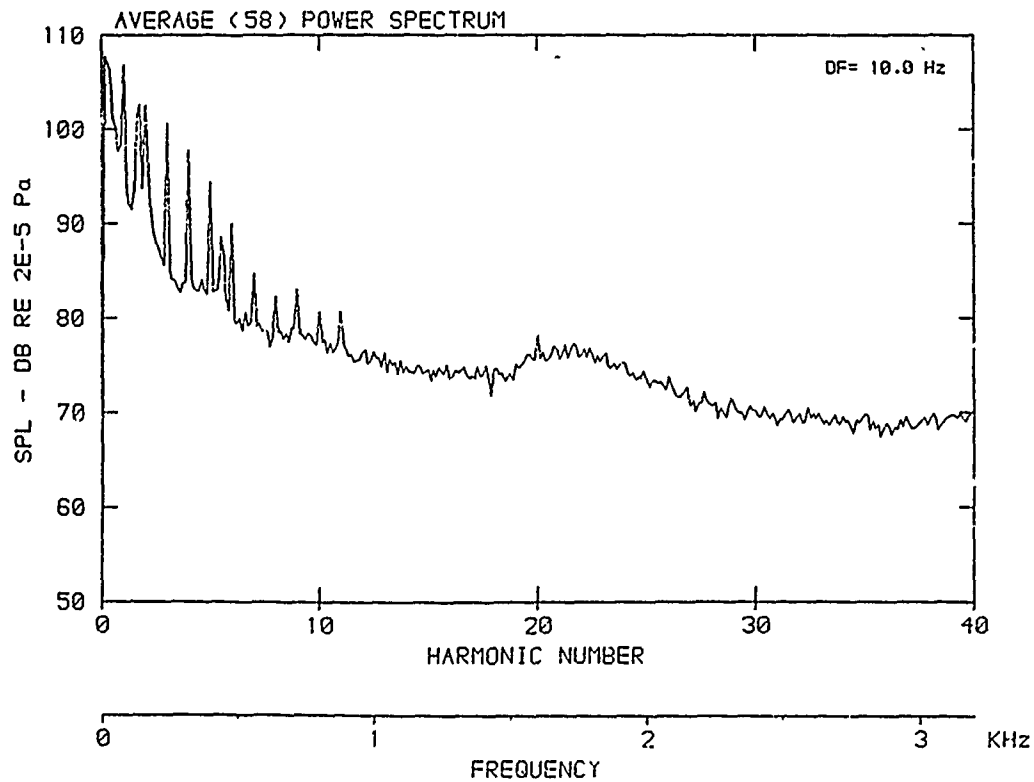
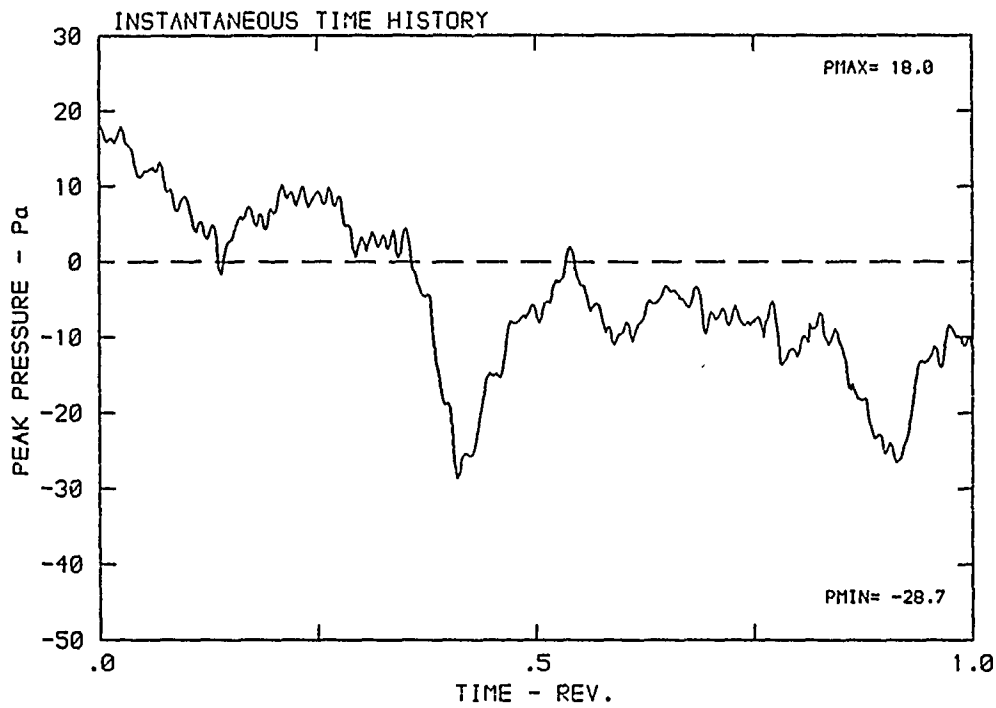
$\beta$ : 20.8°    MH: .8688    n: 2700 rpm    v/u: .242     $\phi$ : .0°    T: 287.9 K





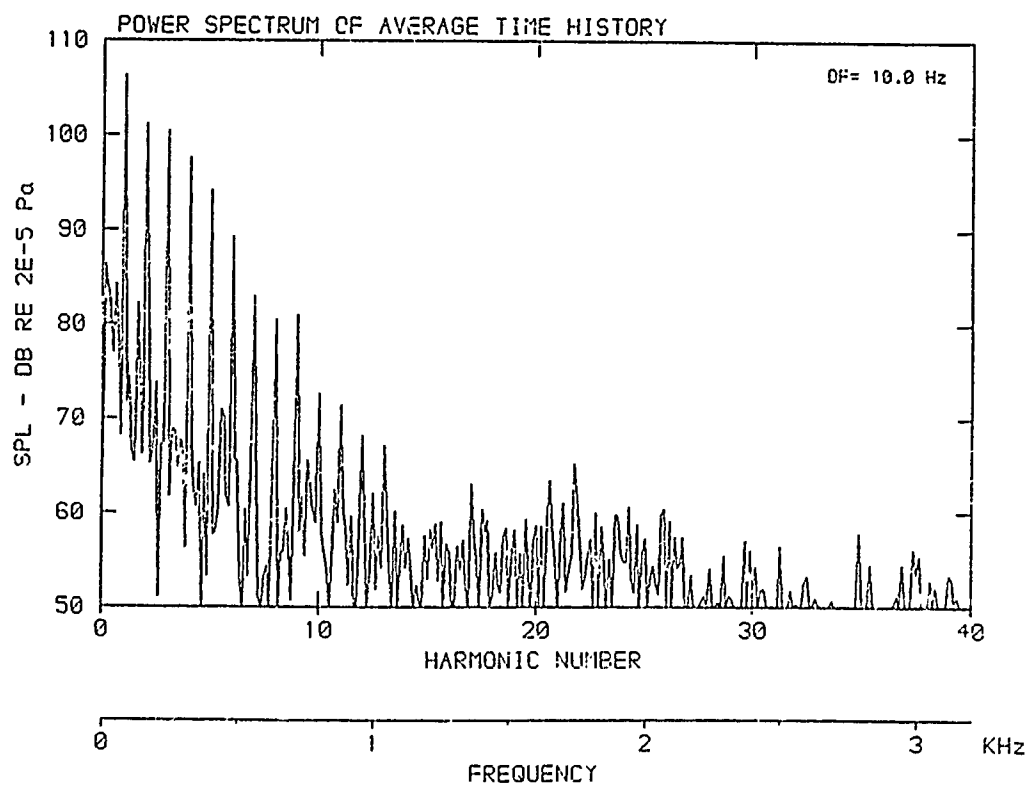
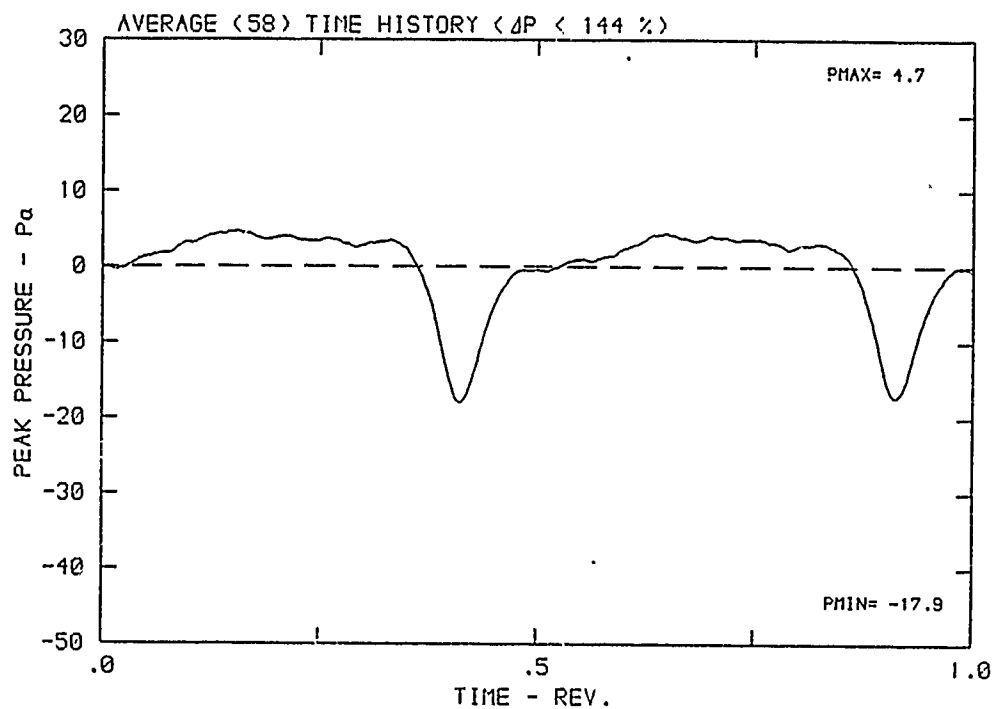
DATA POINT: AN-4      RUN: 67      MP: 1

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



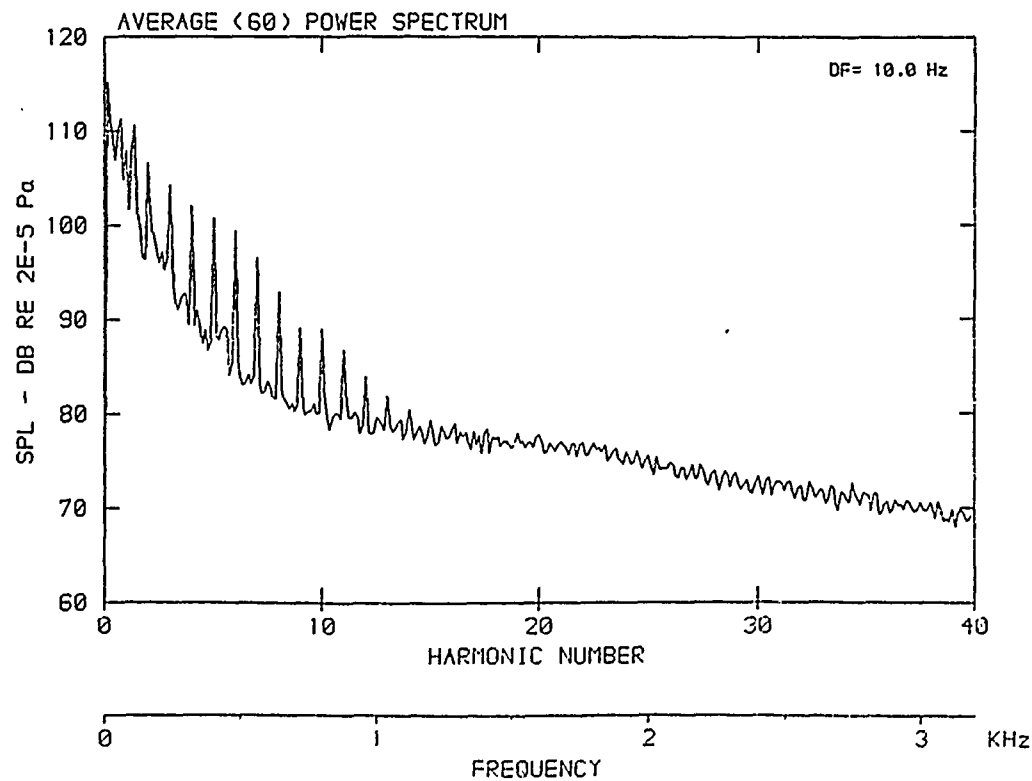
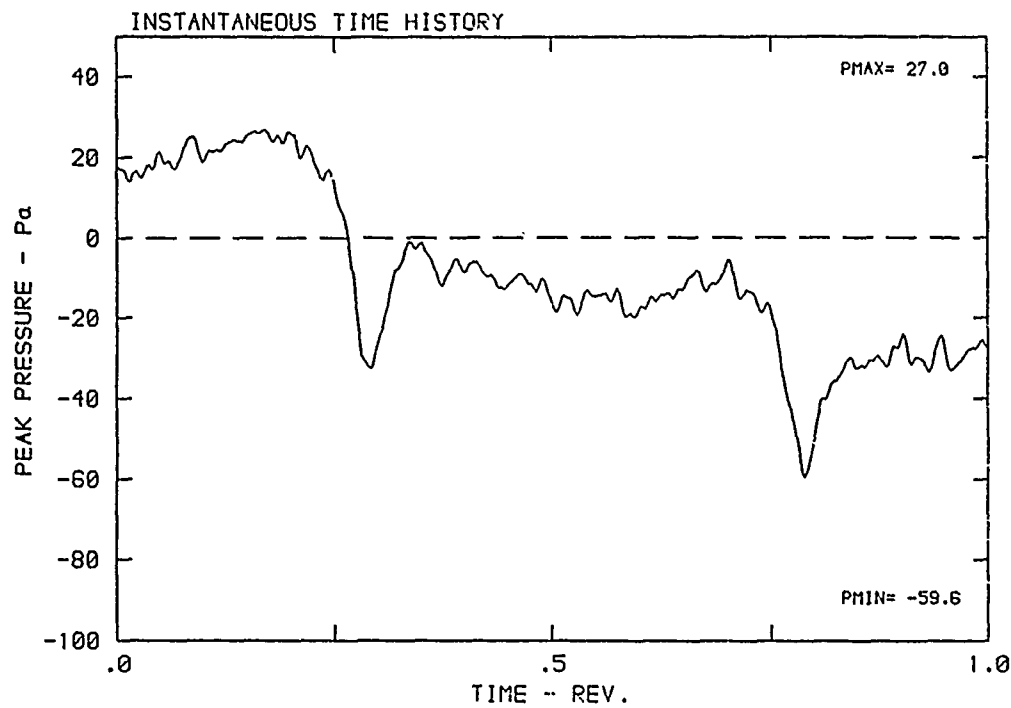
DATA POINT: AN-4      RUN: 67      MP: 1

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



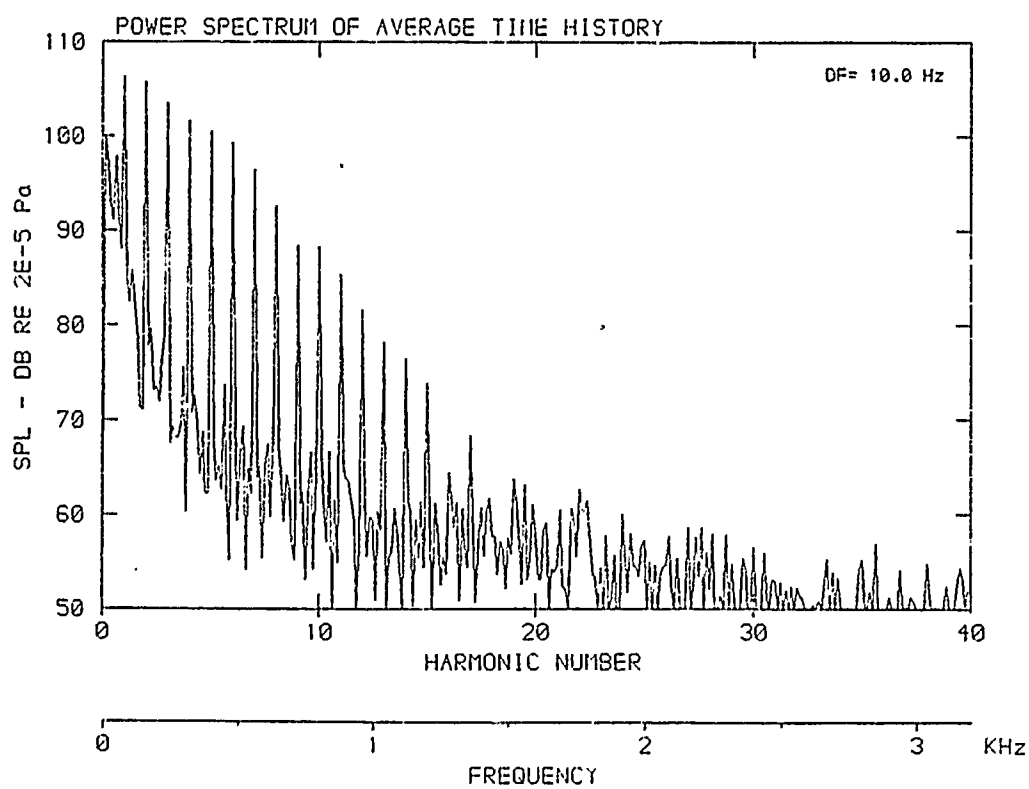
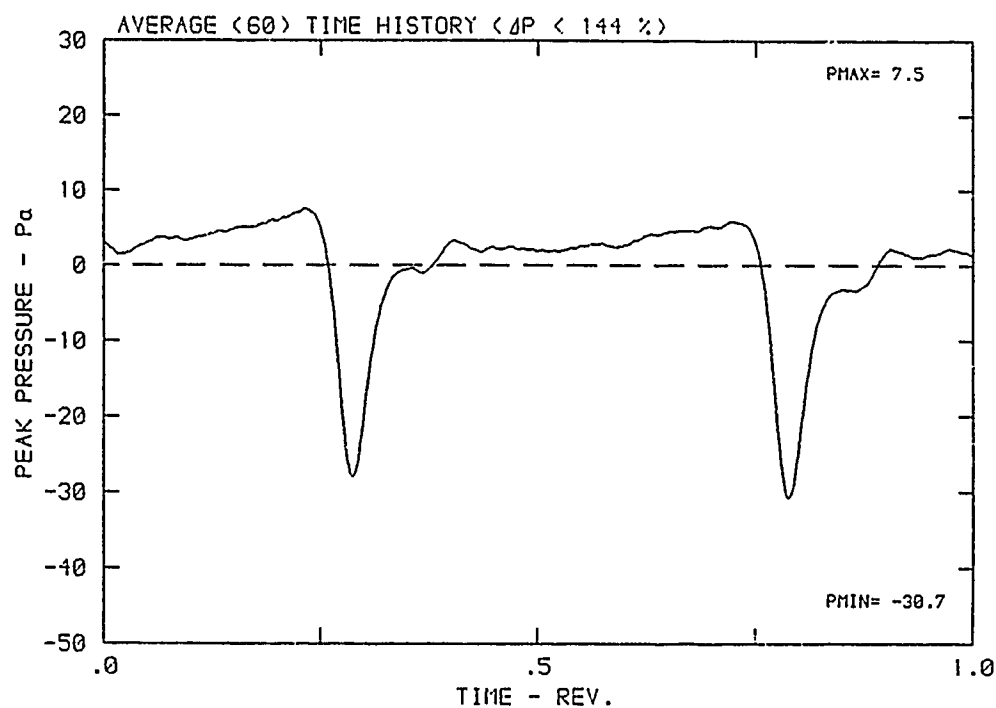
DATA POINT: AN-4 RUN: 67 MP: 2

$\beta$ : 20.8° MH: .7809 n: 2400 rpm v/u: .302  $\phi$ : .0° T: 290.3 K



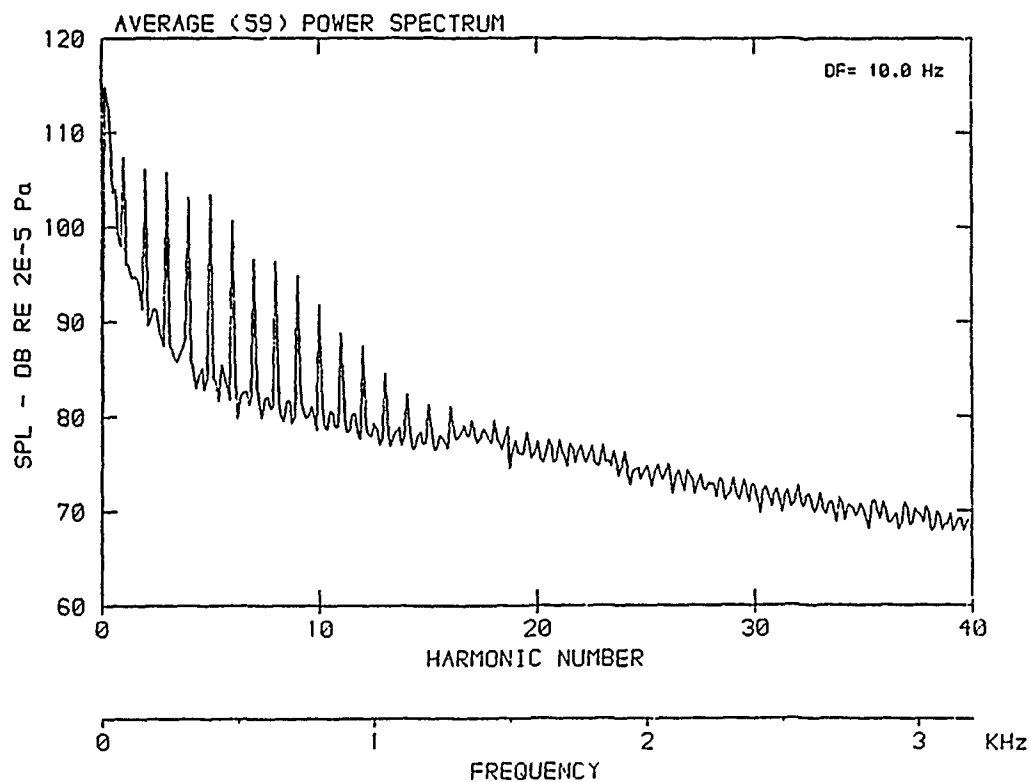
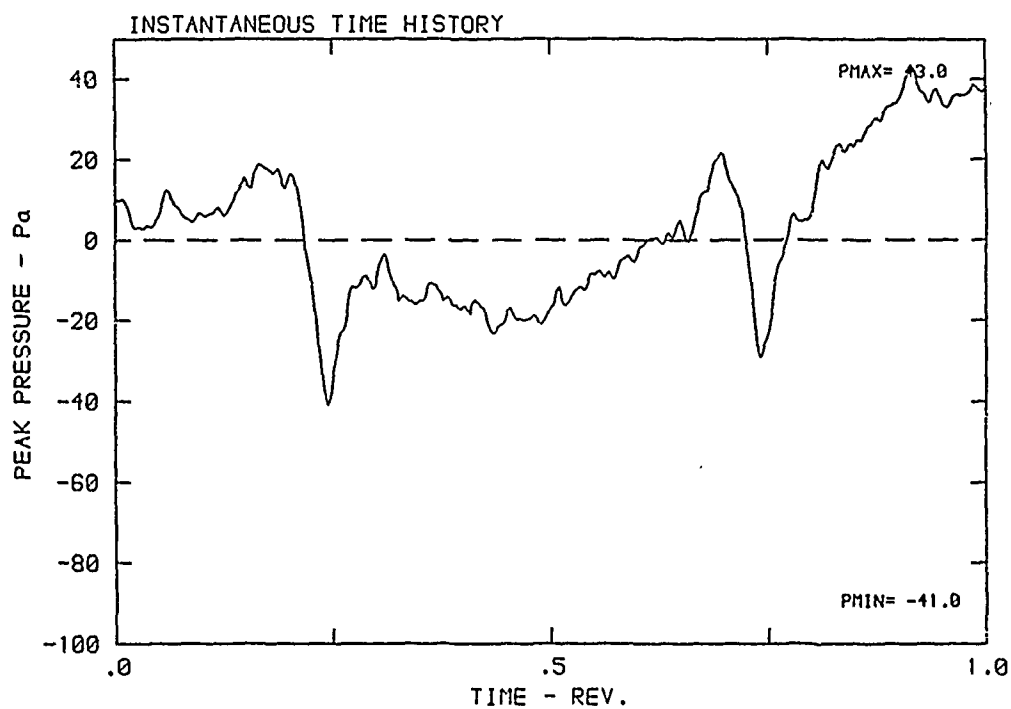
DATA POINT: AN-4    RUN: 67    MP: 2

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



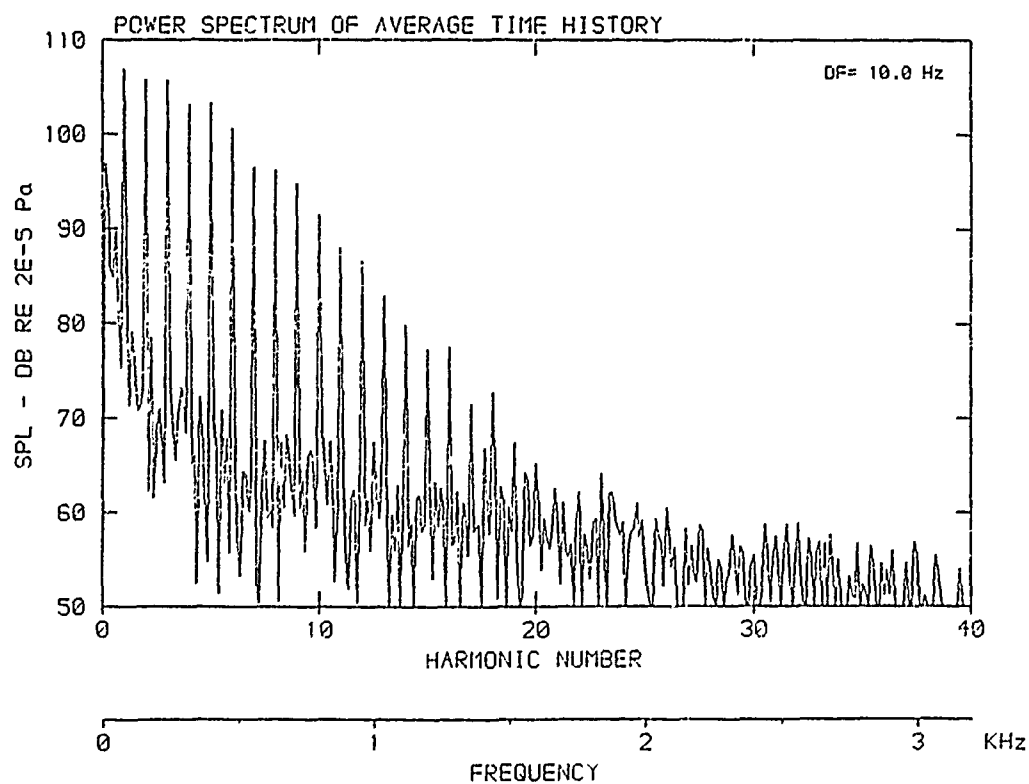
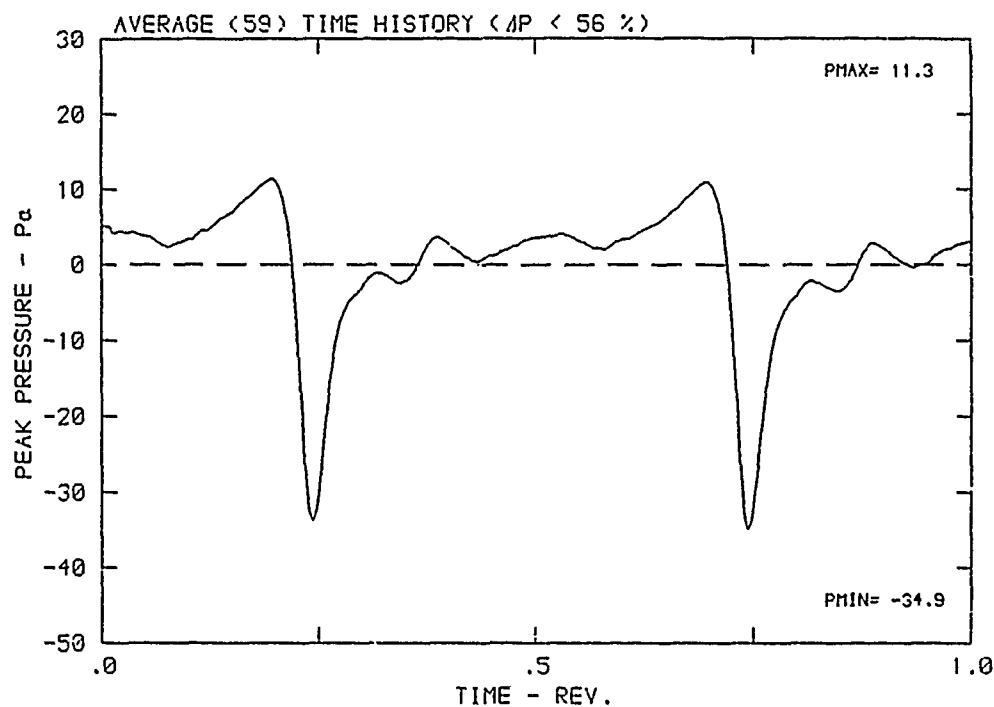
DATA POINT: AN-4    RUN: 67    MP: 3

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



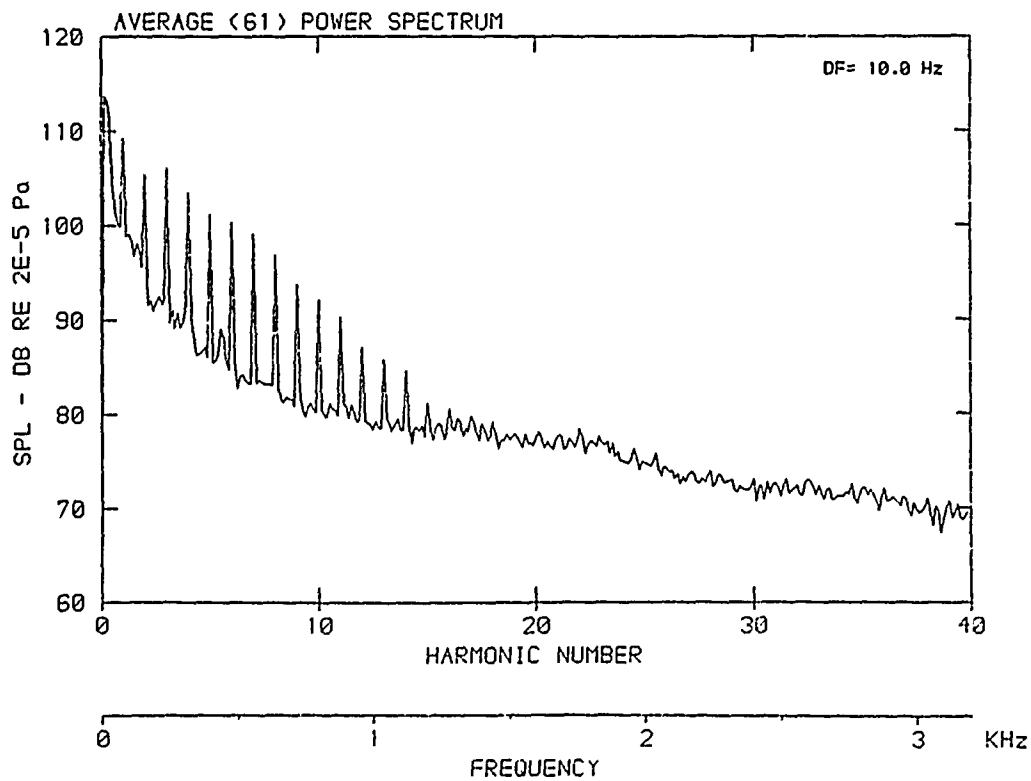
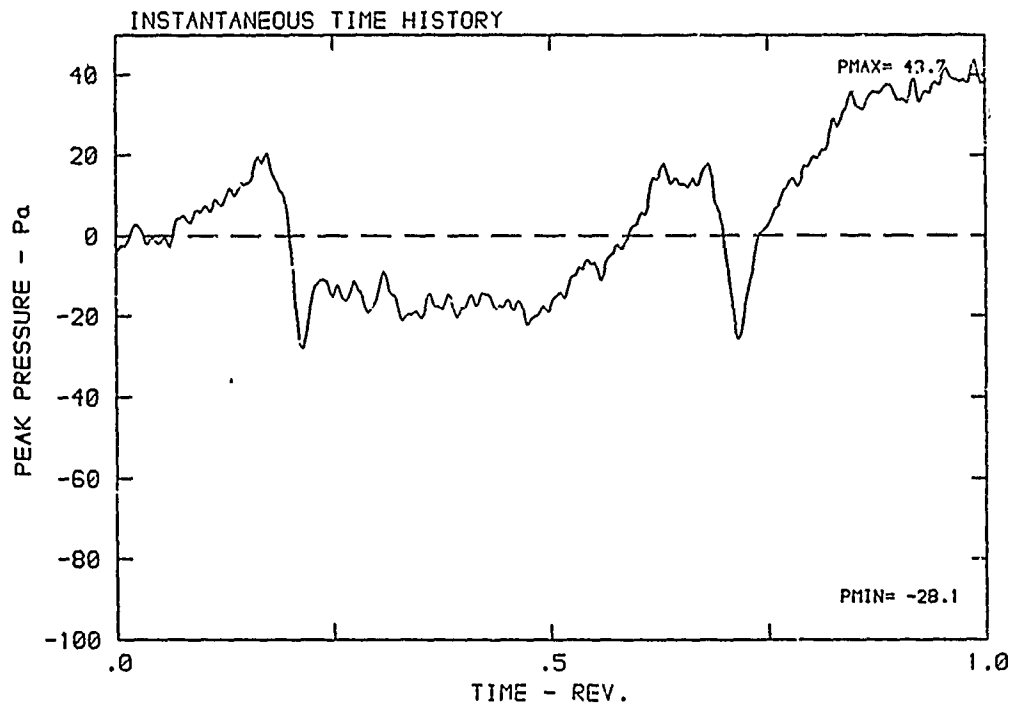
DATA POINT: AN-4 RUN: 67 MP: 3

$\beta$ : 20.8° MH: .7809 n: 2400 rpm v/u: .302  $\phi$ : .0° T: 290.3 K



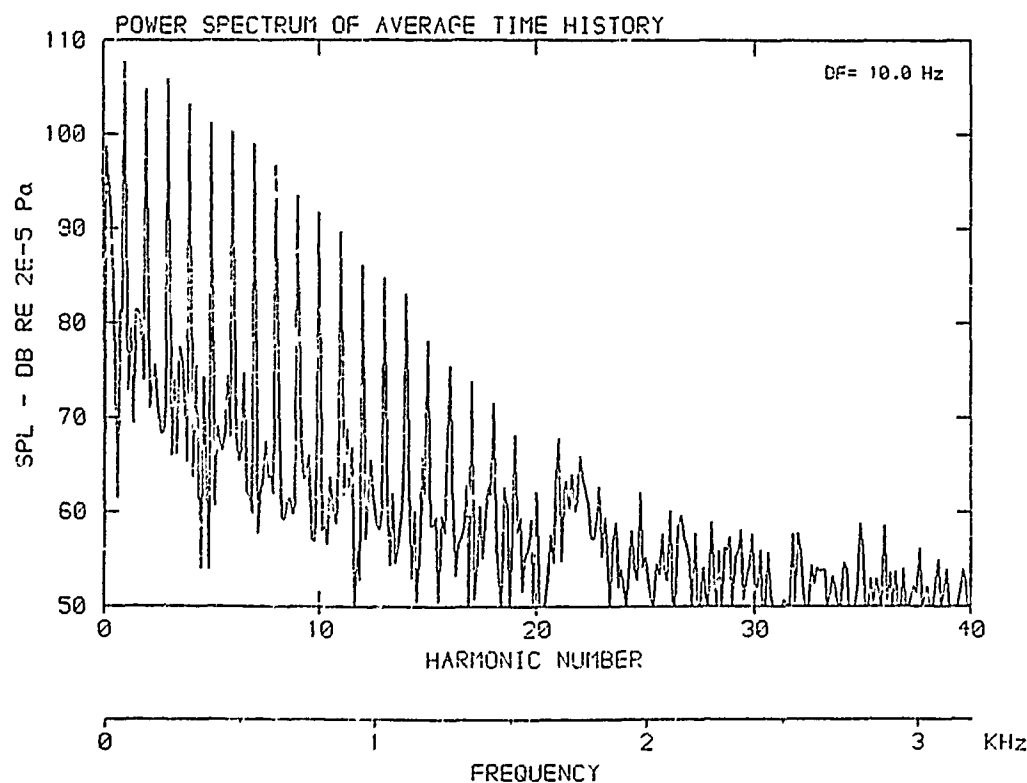
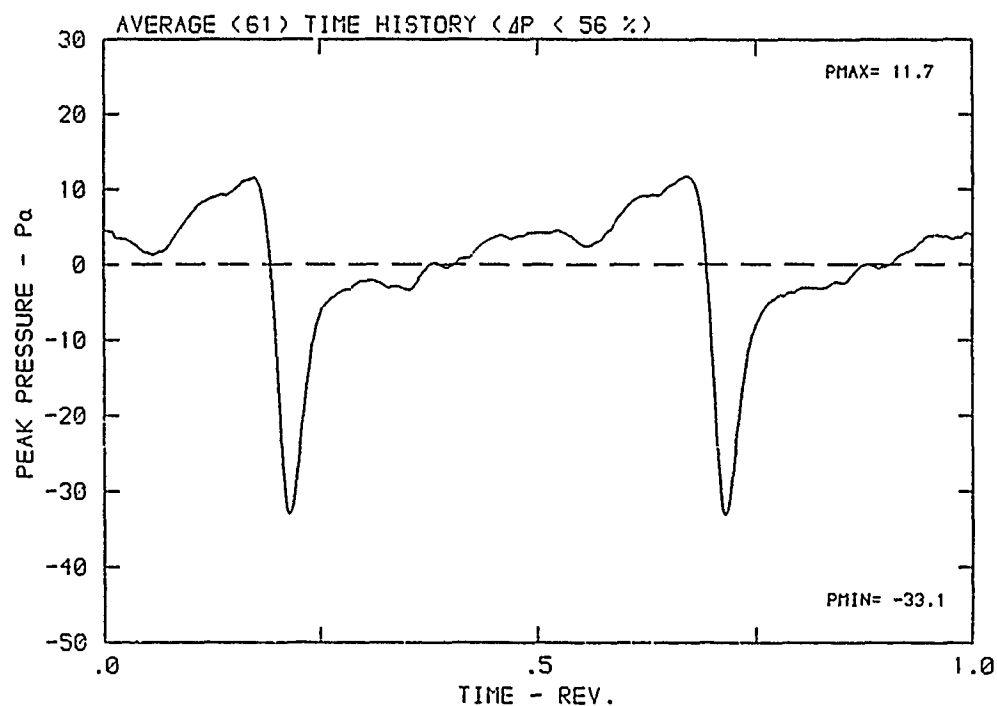
DATA POINT: AN-4    RUN: 67    MP: 4

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



DATA POINT: AN-4 RUN: 67 MP: 4

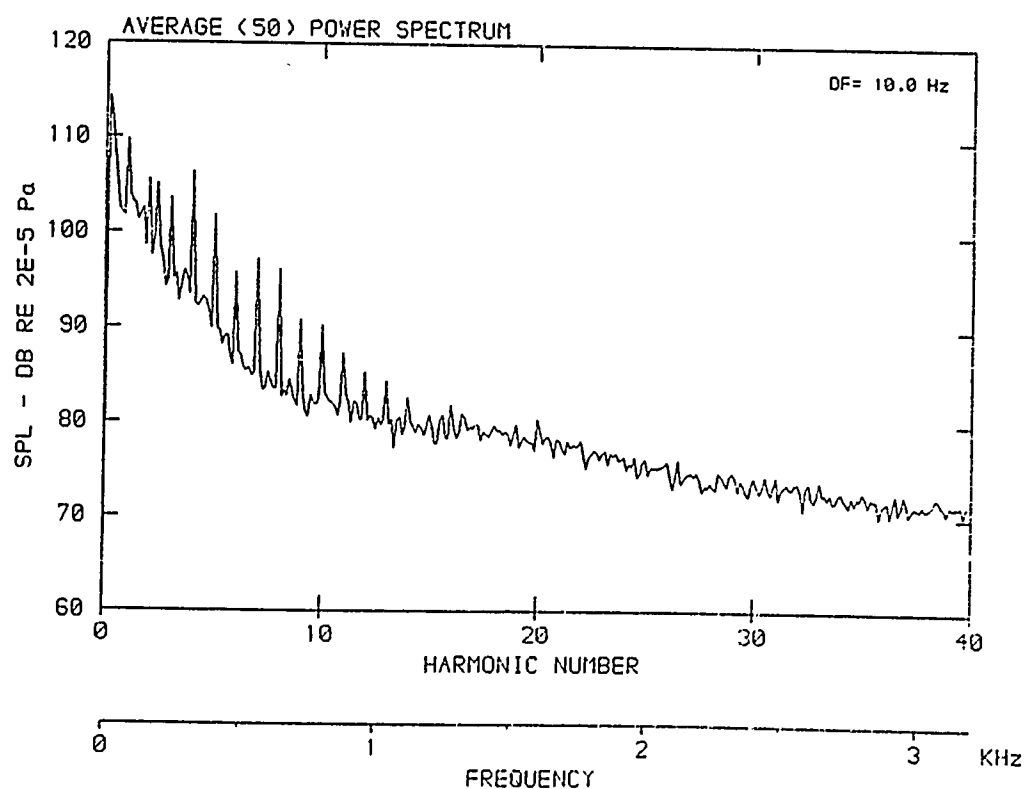
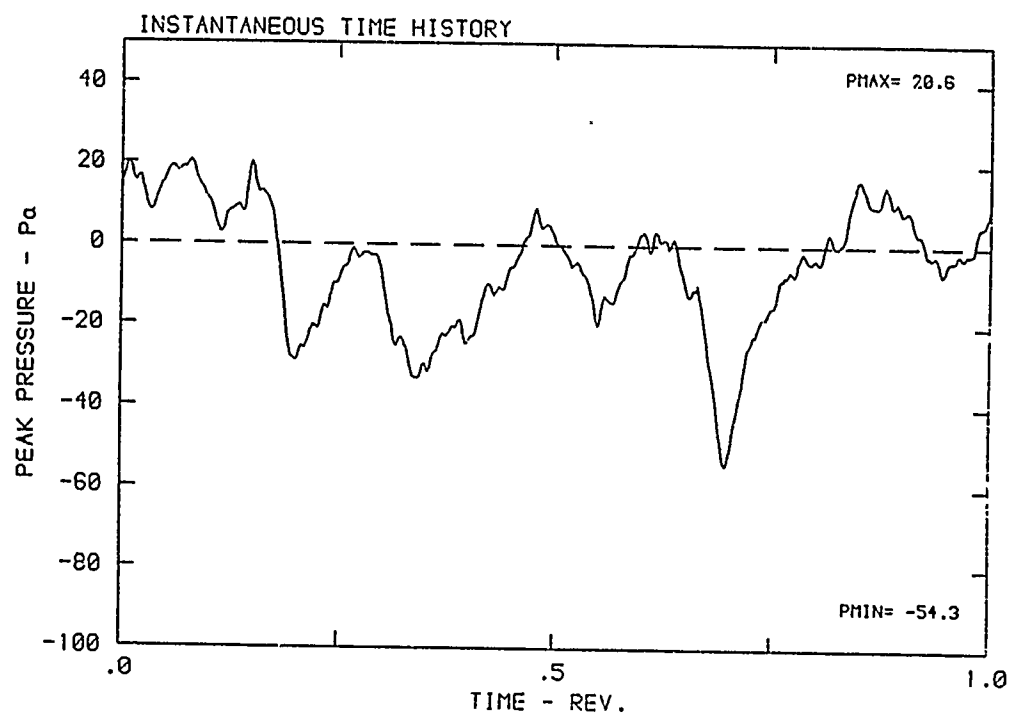
$\beta$ : 20.8° MH: .7809 n: 2400 rpm v/u: .302  $\phi$ : .0° T: 290.3 K





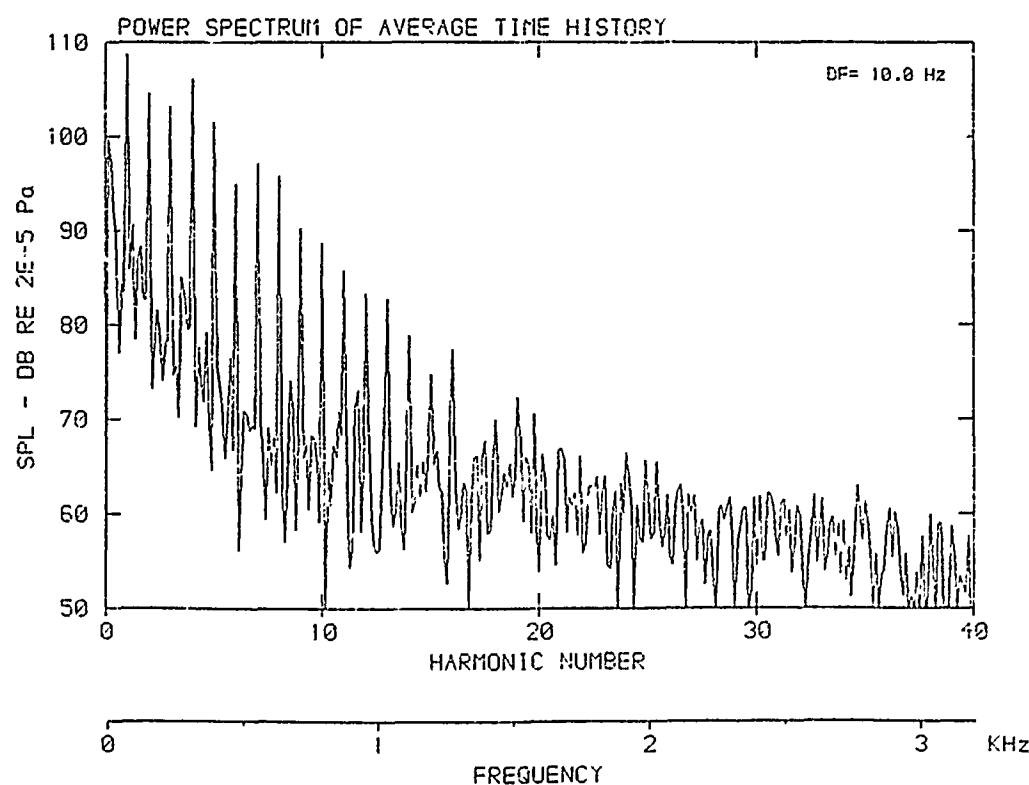
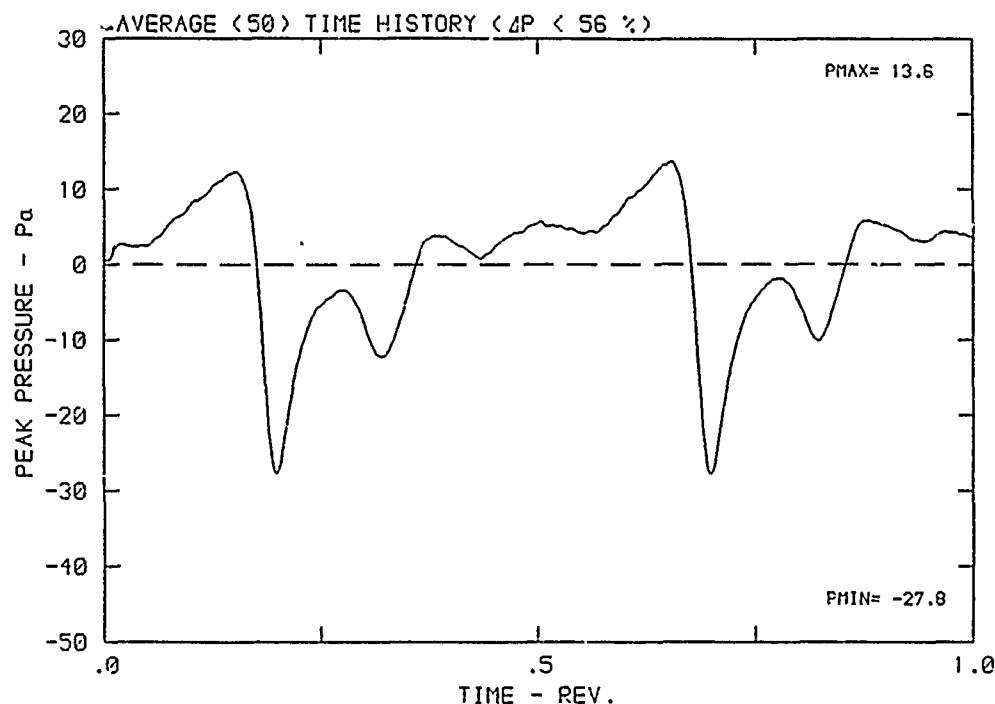
DATA POINT: AN-4      RUN: 67      MP: 5

$\beta$ : 20.8°    NH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K

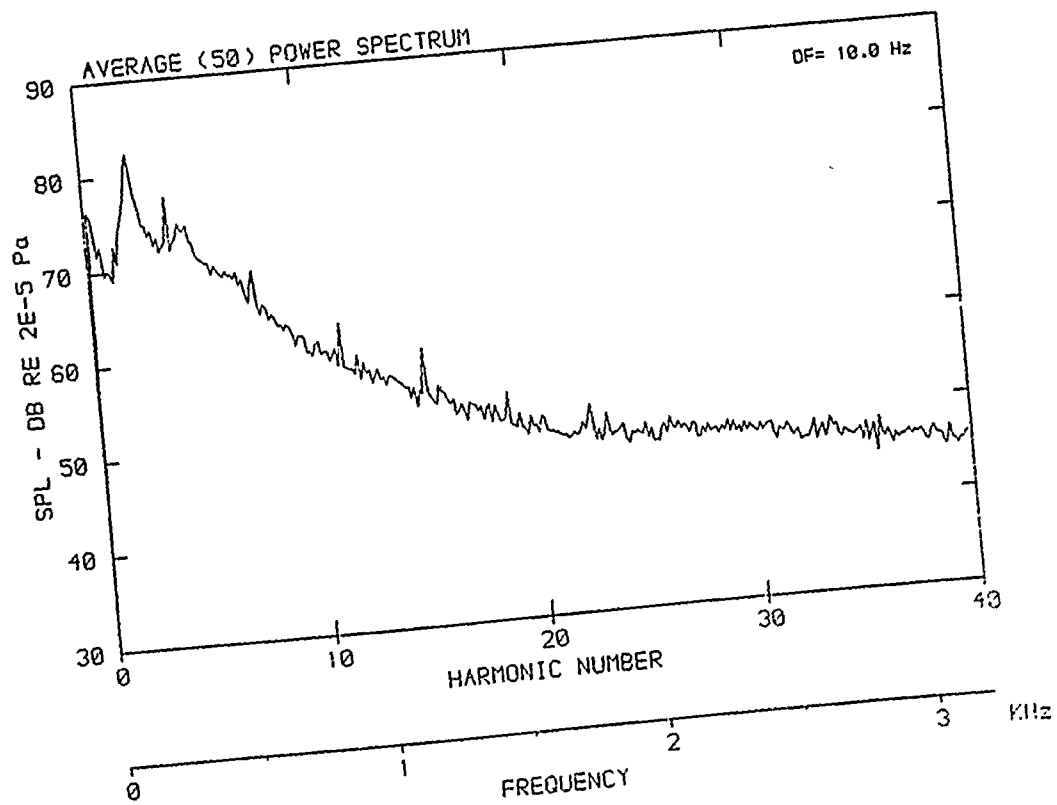
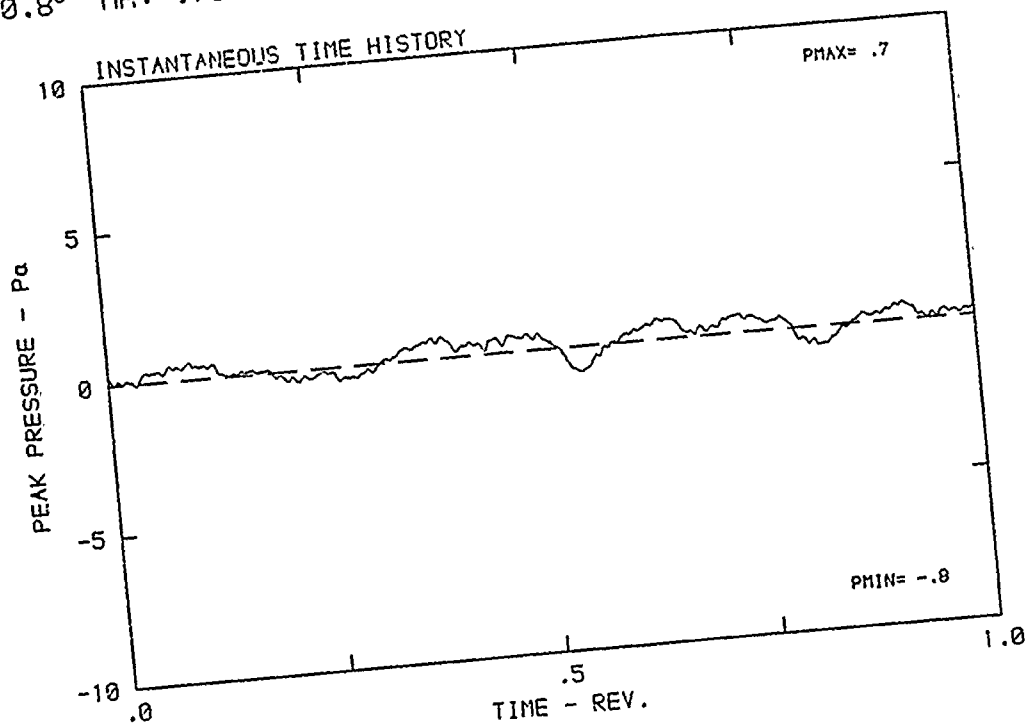


DATA POINT: AN-4 RUN: 67 MP: 5

$\beta$ : 20.8° MH: .7809 n: 2400 rpm v/u: .302  $\phi$ : .0° T: 290.3 K

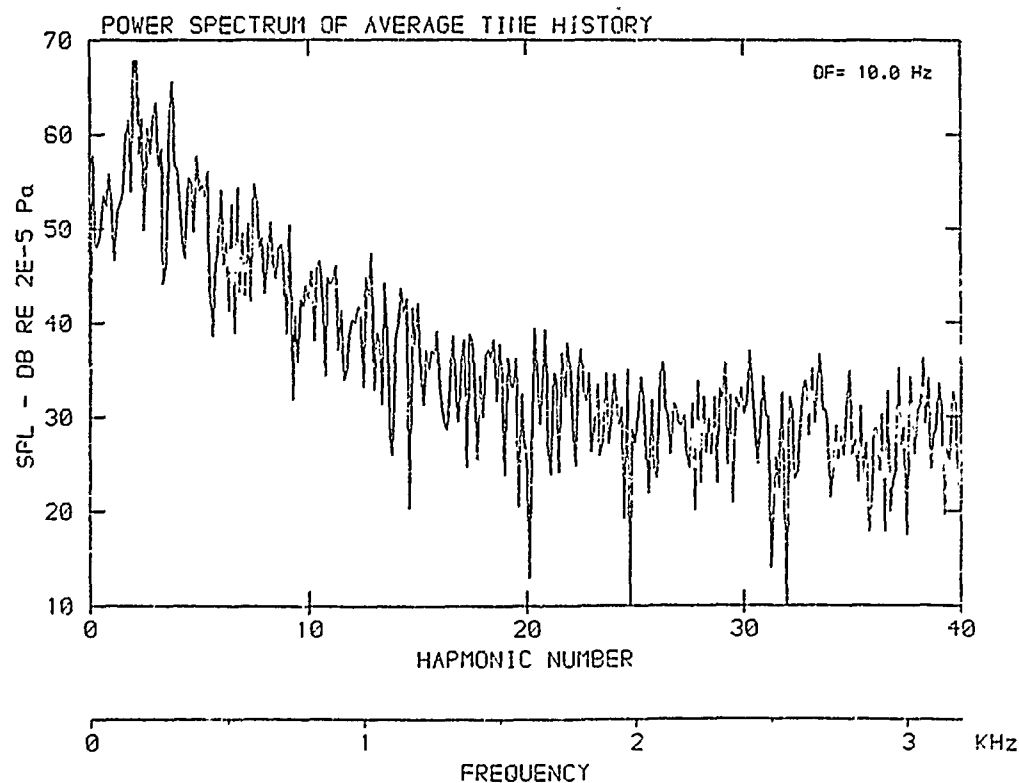
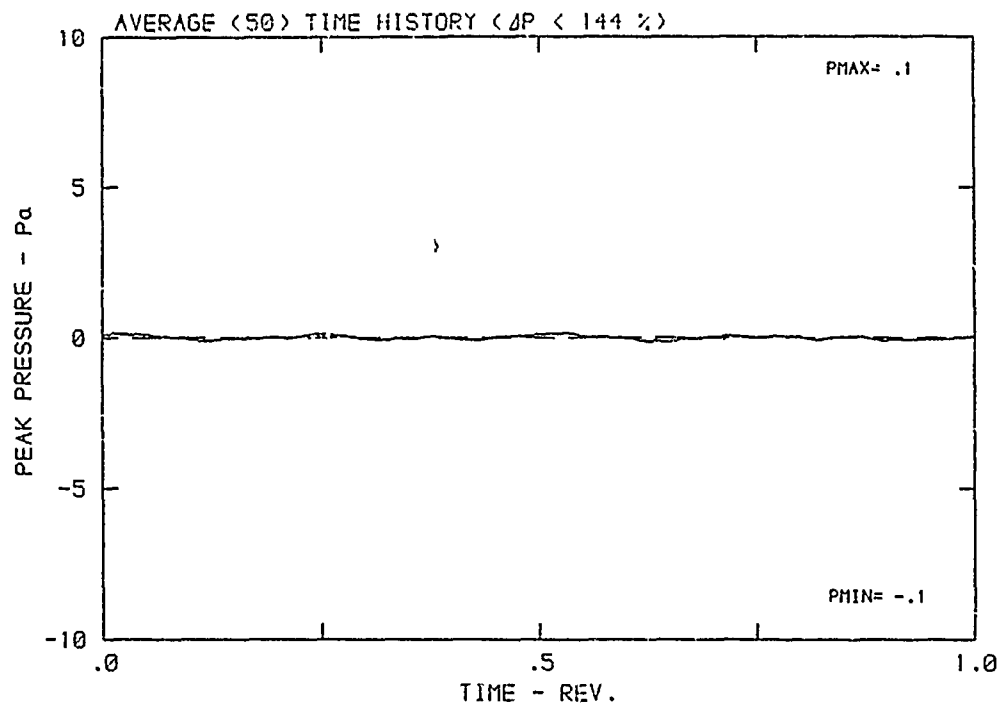


DATA POINT: AN-4 RUN: 67 MP: 5  
 $\beta$ : 20.8° MH: .7809 n: 2400 rpm  $v/u$ : .302  $\phi$ : .0° T: 290.3 K



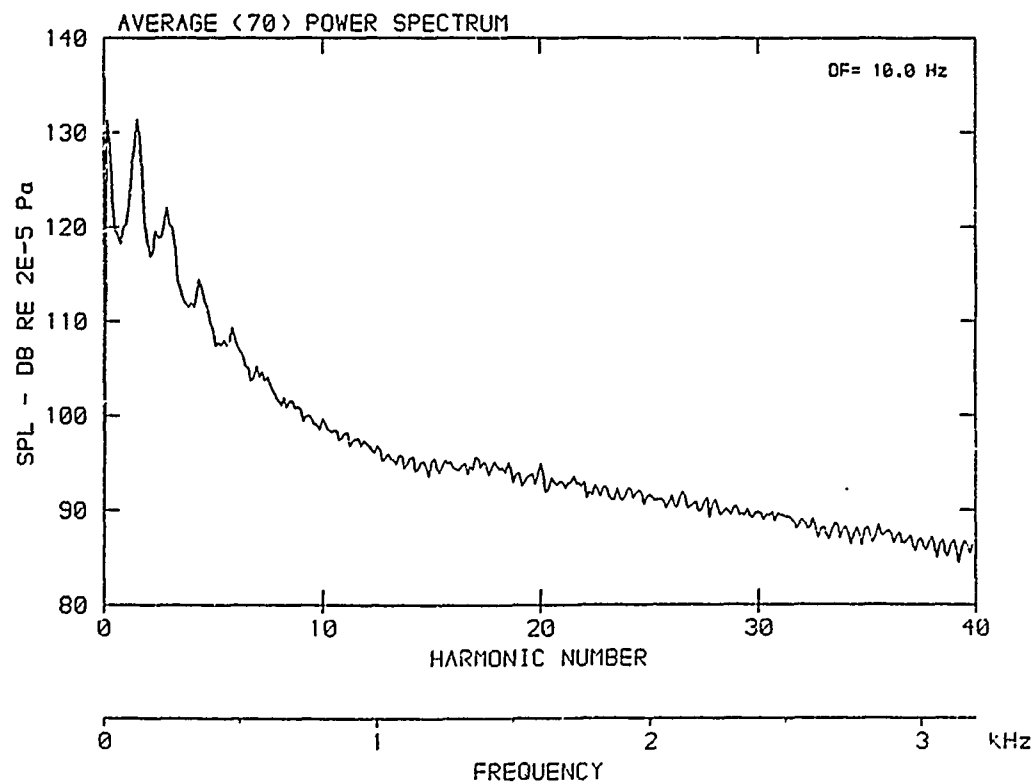
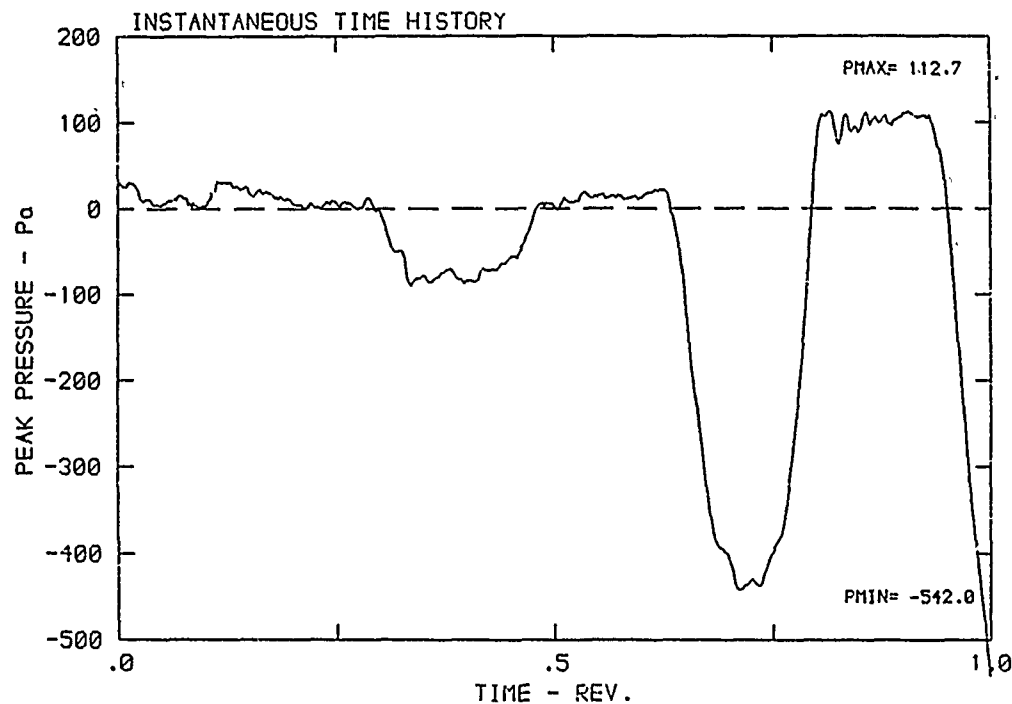
DATA POINT: AN-4    RUN: 67    MP: 6

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm     $v/u$ : .302     $\phi$ : .0°    T: 290.3 K



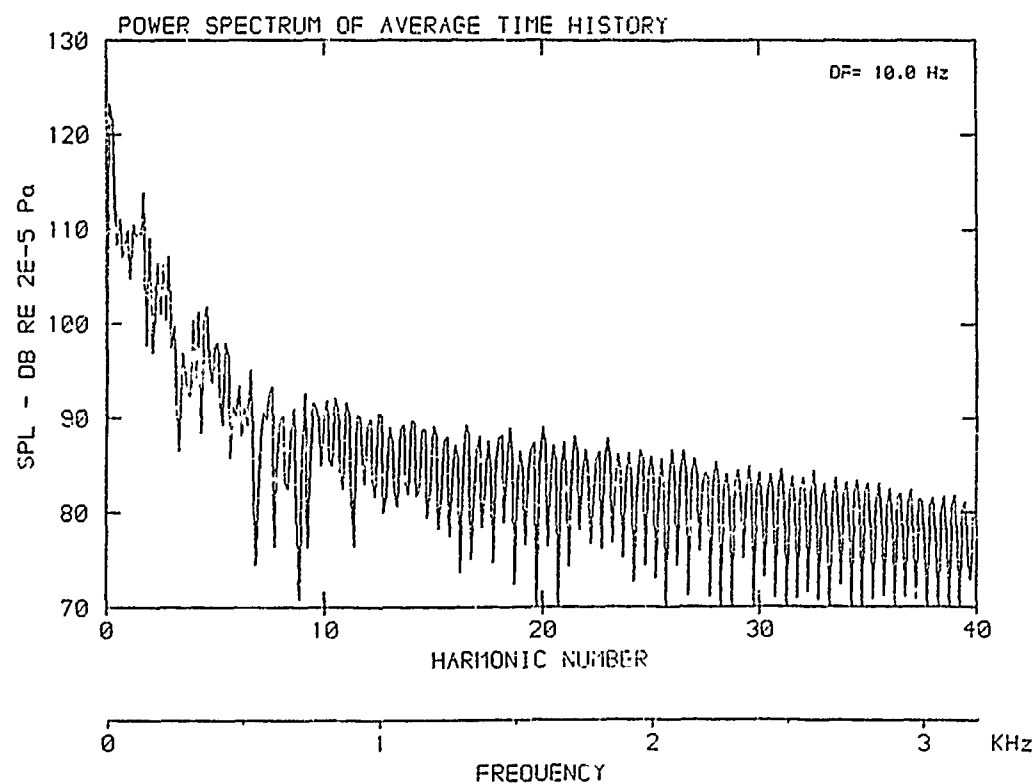
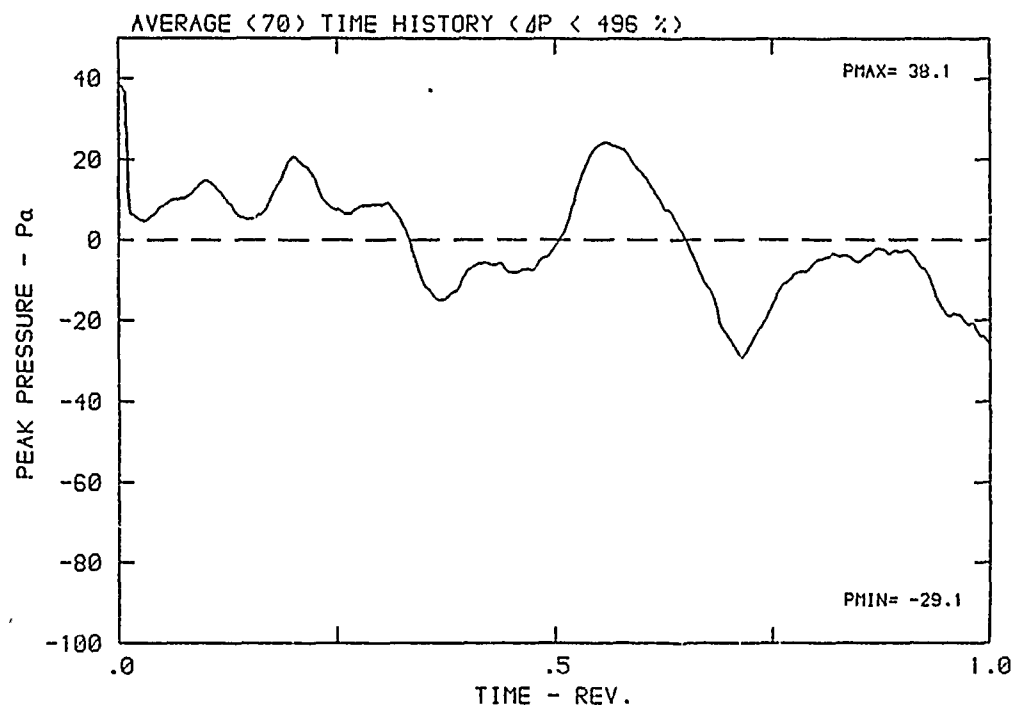
DATA POINT: AN-4    RUN: 67    MP: 7

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



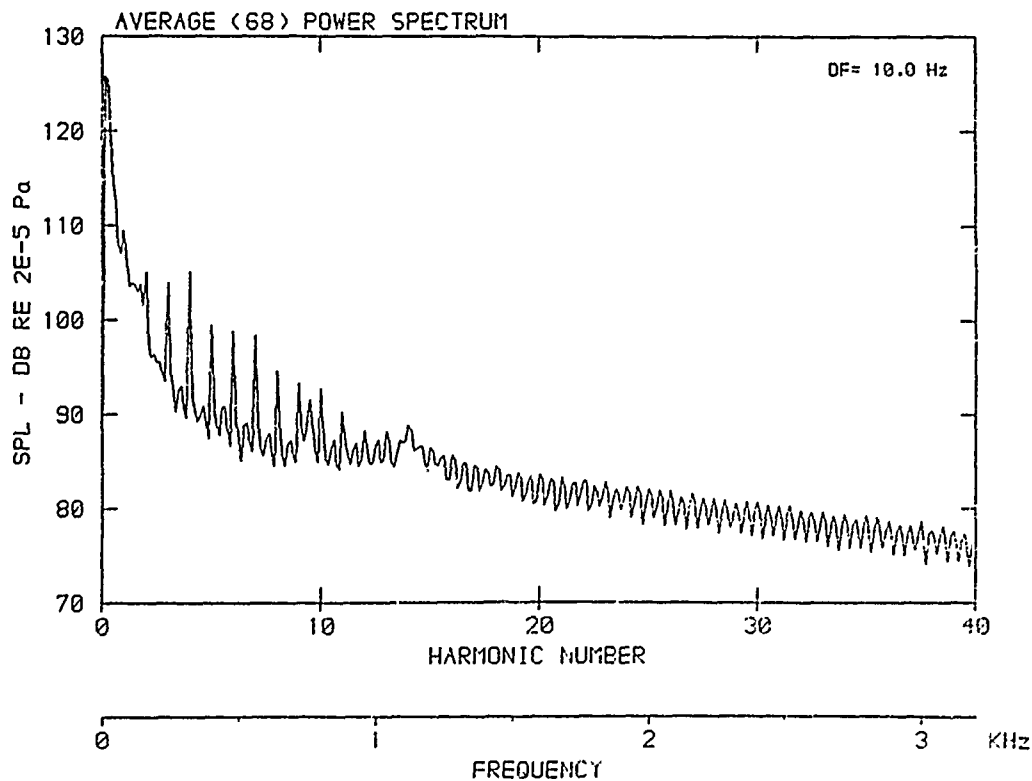
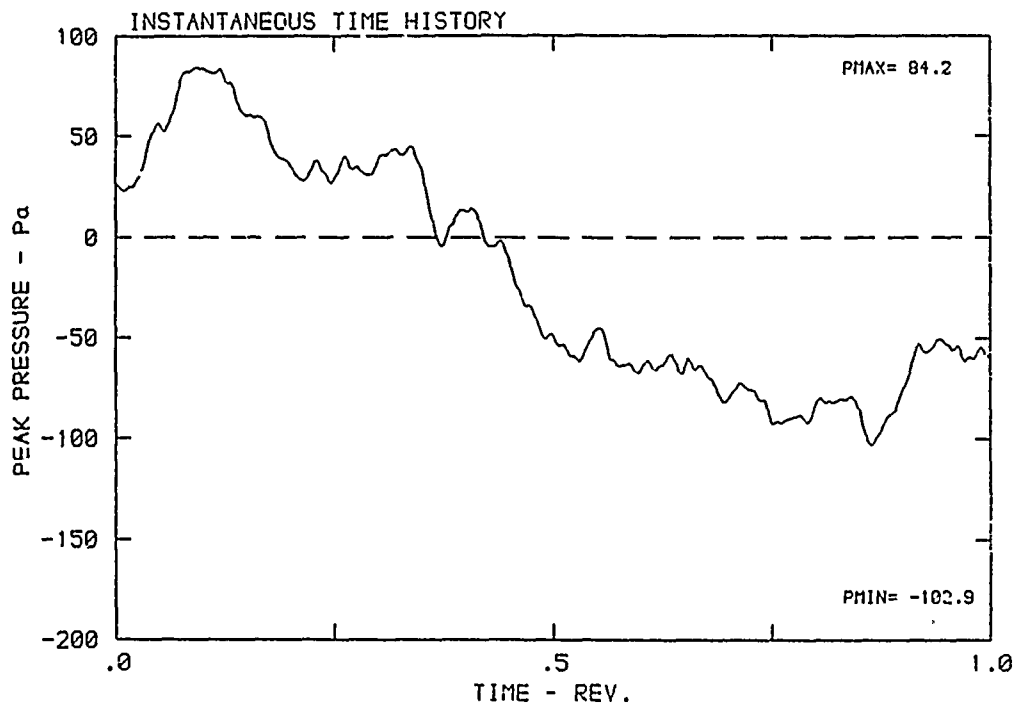
DATA POINT: AN-4    RUN: 67    MP: 7

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm     $v/u$ : .302     $\phi$ : .0°    T: 290.3 K



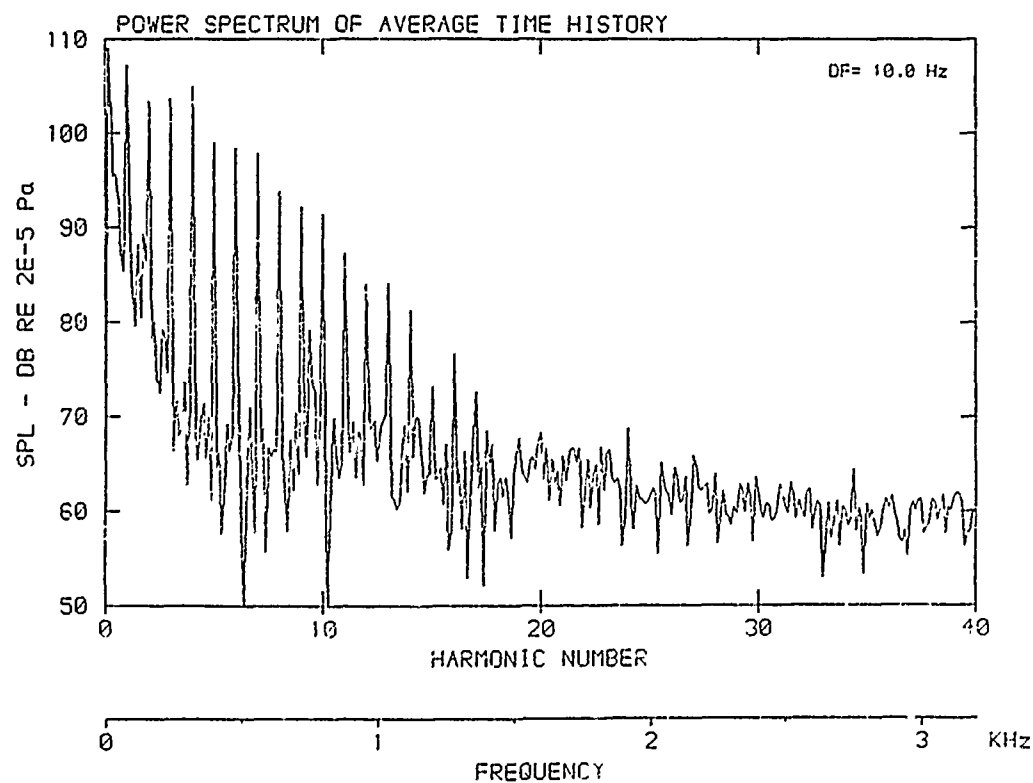
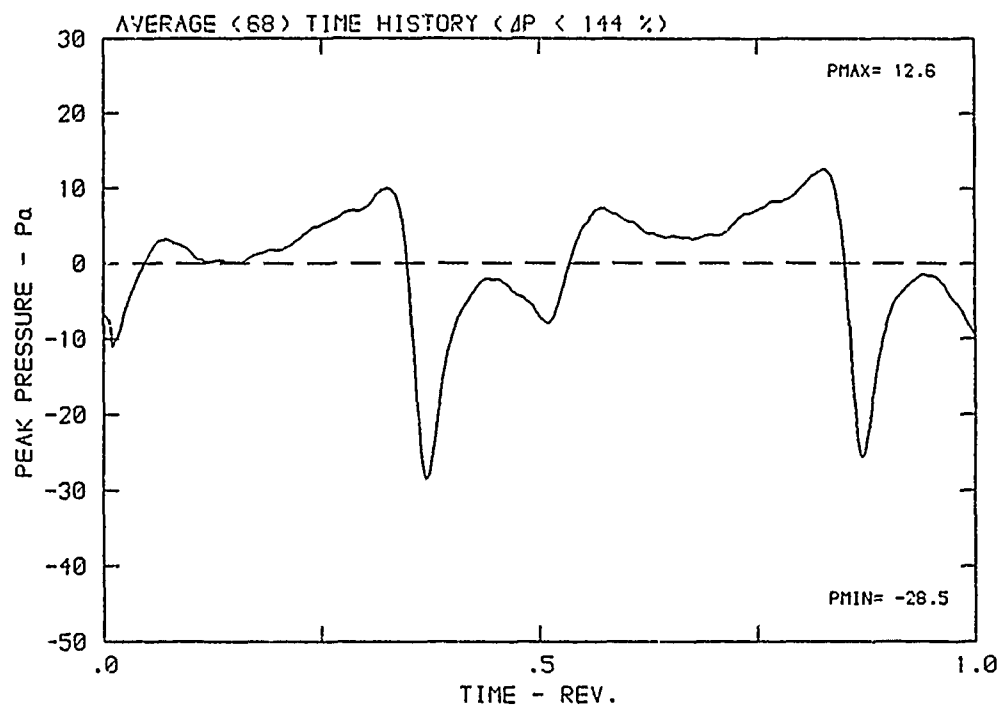
DATA POINT: AN-4    RUN: 67    MP: 9

$\beta$ : 20.8°    MH: .7809    n: 2400 rpm    v/u: .302     $\phi$ : .0°    T: 290.3 K



DATA POINT: AN-4 RUN: 67 MP: 9

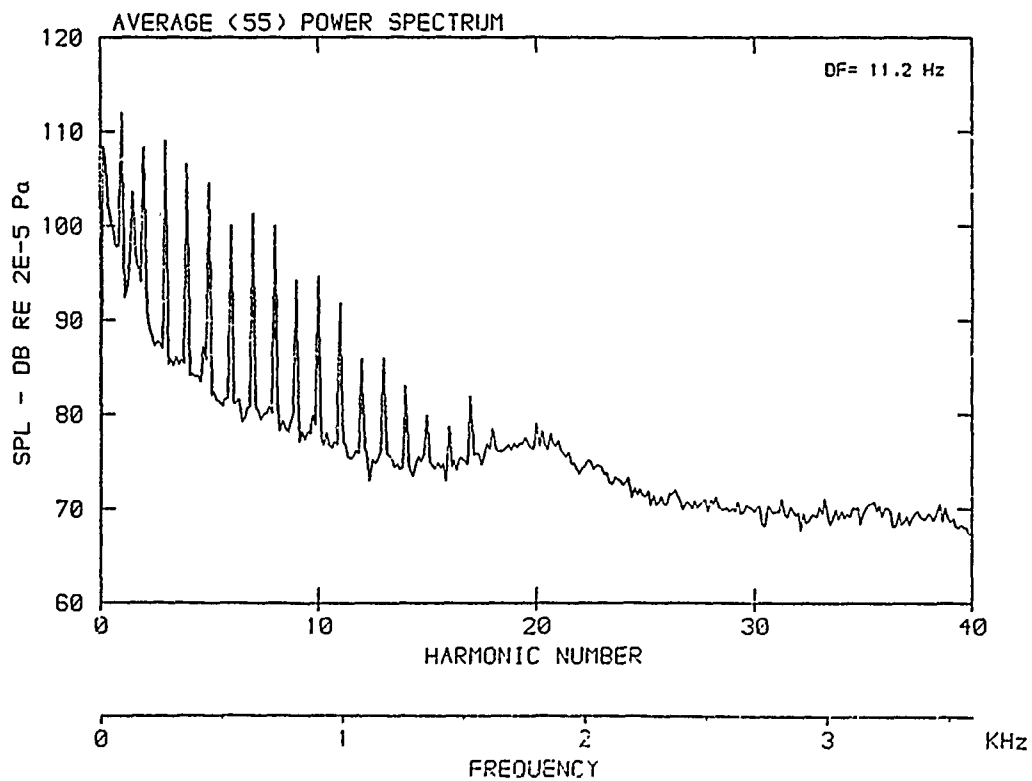
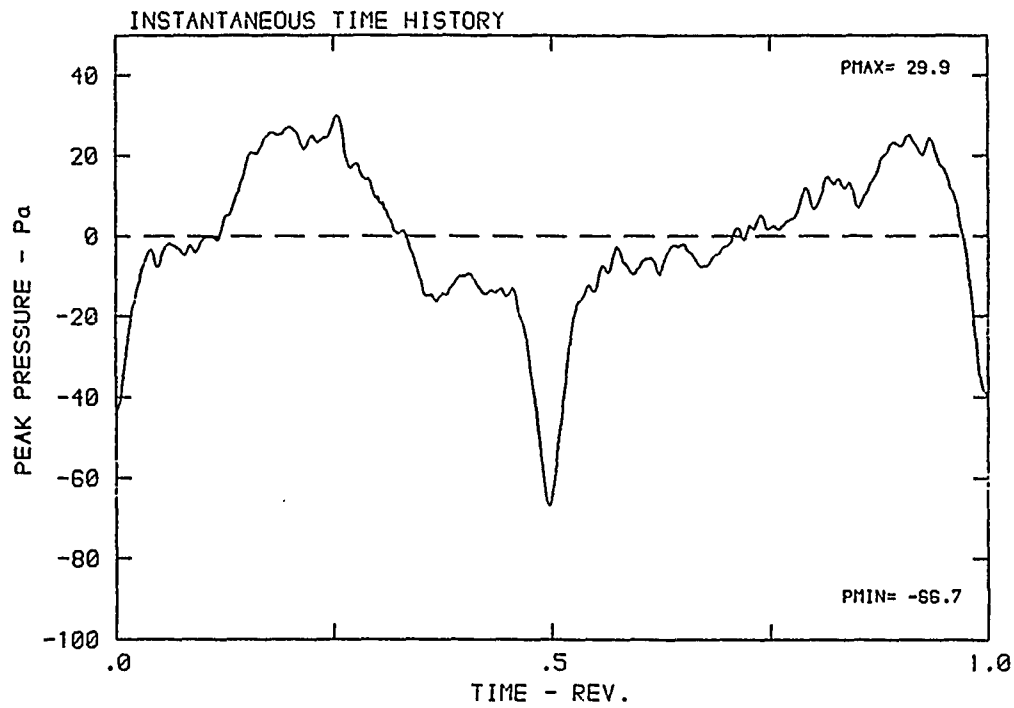
$\beta$ : 20.8° MH: .7809 n: 2400 rpm v/u: .302  $\phi$ : .0° T: 290.3 K





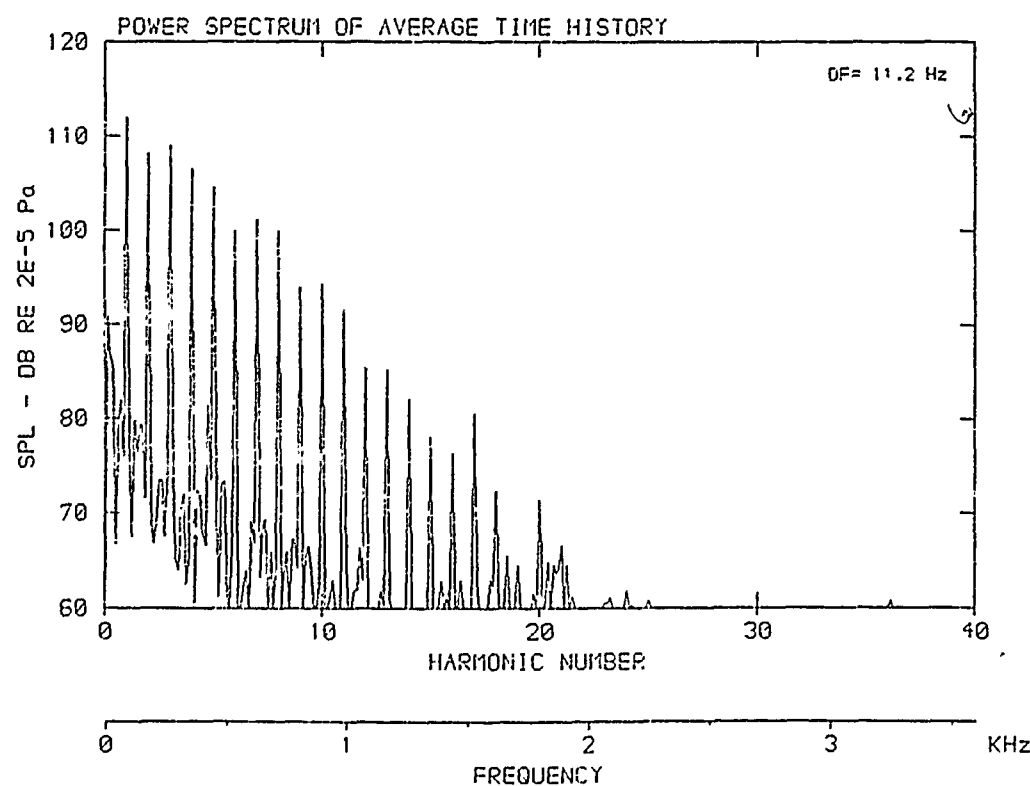
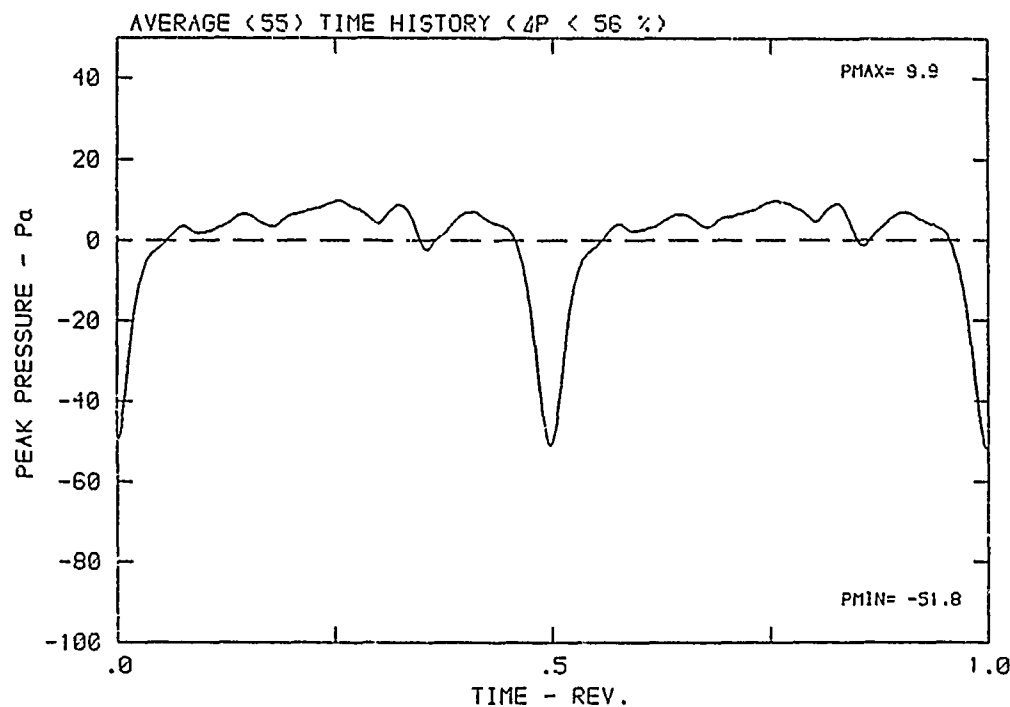
DATA POINT: AN-5      RUN: 66      MP: 1

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



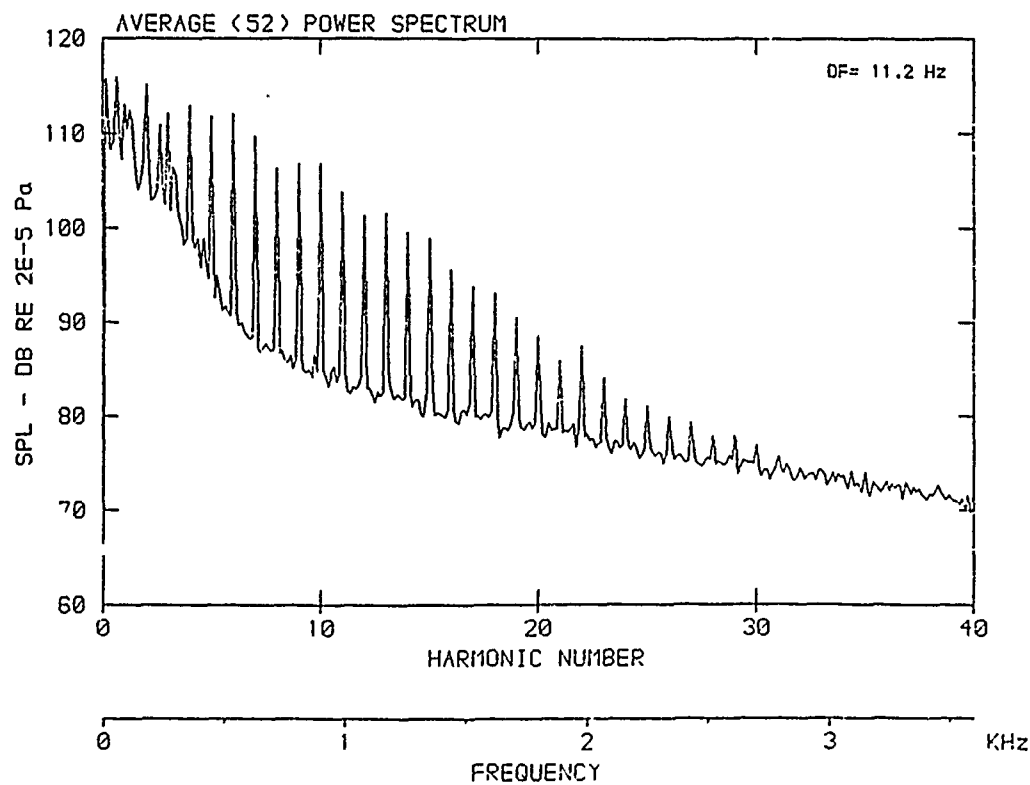
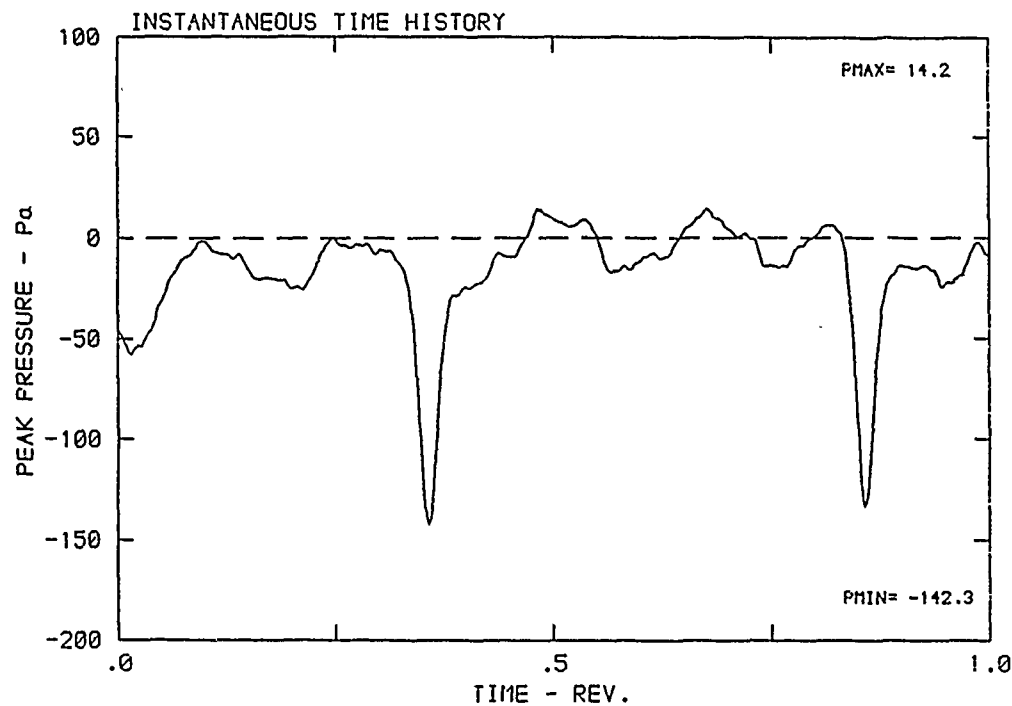
DATA POINT: AN-5    RUN: 66    MP: 1

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



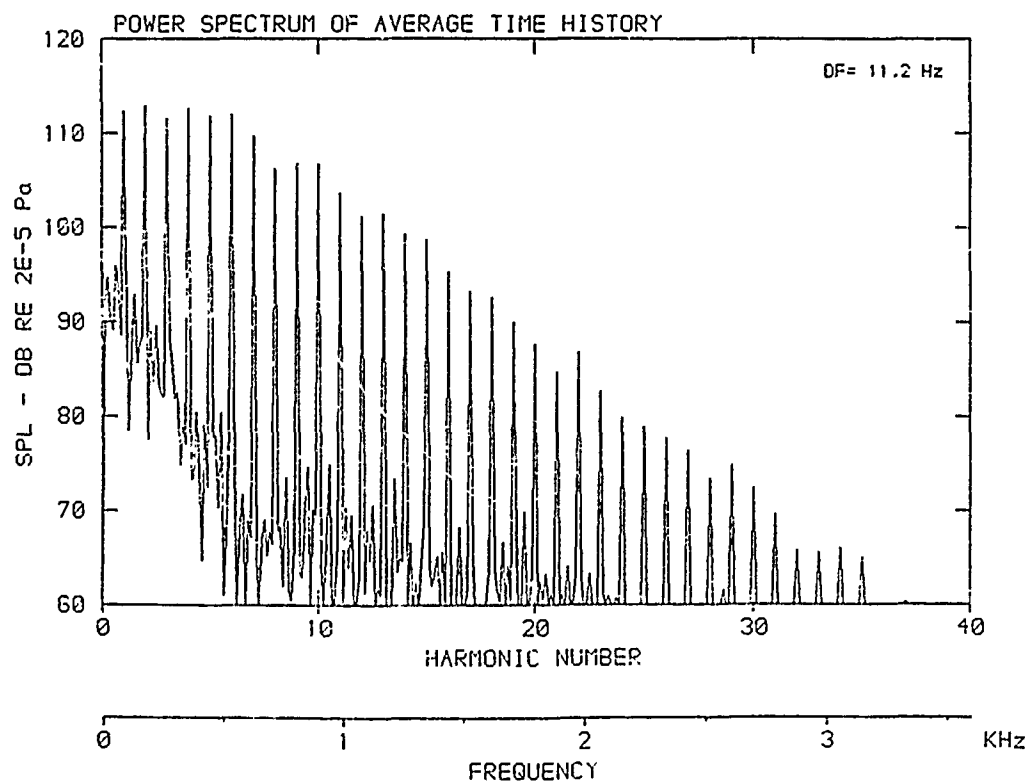
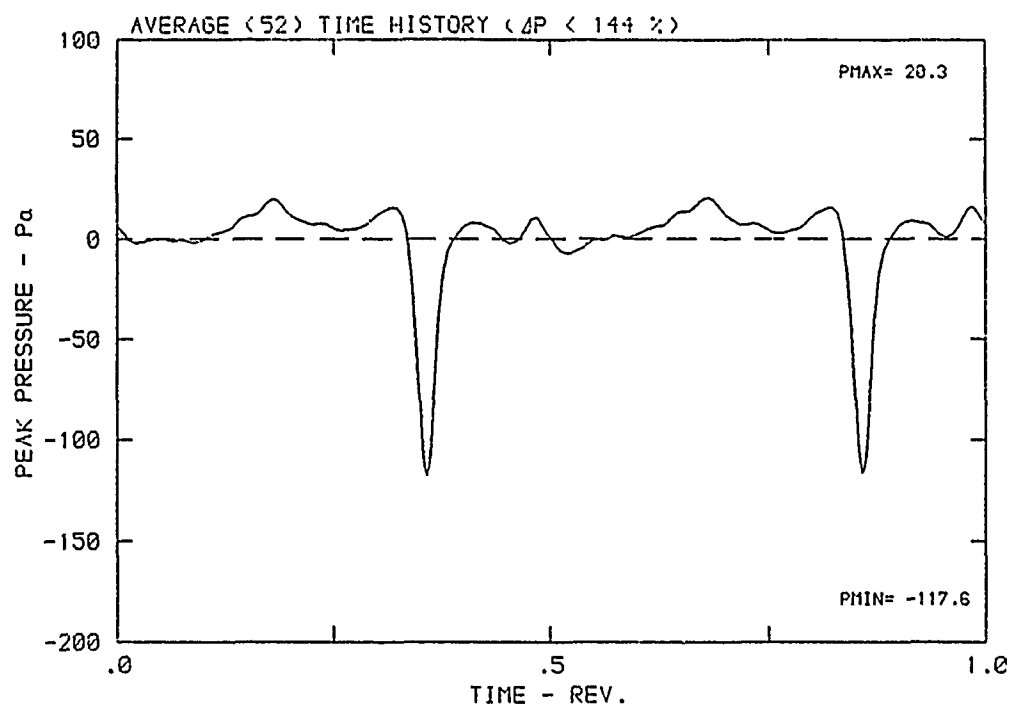
DATA POINT: AN-5 RUN: 66 MP: 2

$\beta$ : 20.8° MH: .8720 n: 2700 rpm v/u: .268  $\phi$ : .0° T: 289.4 K



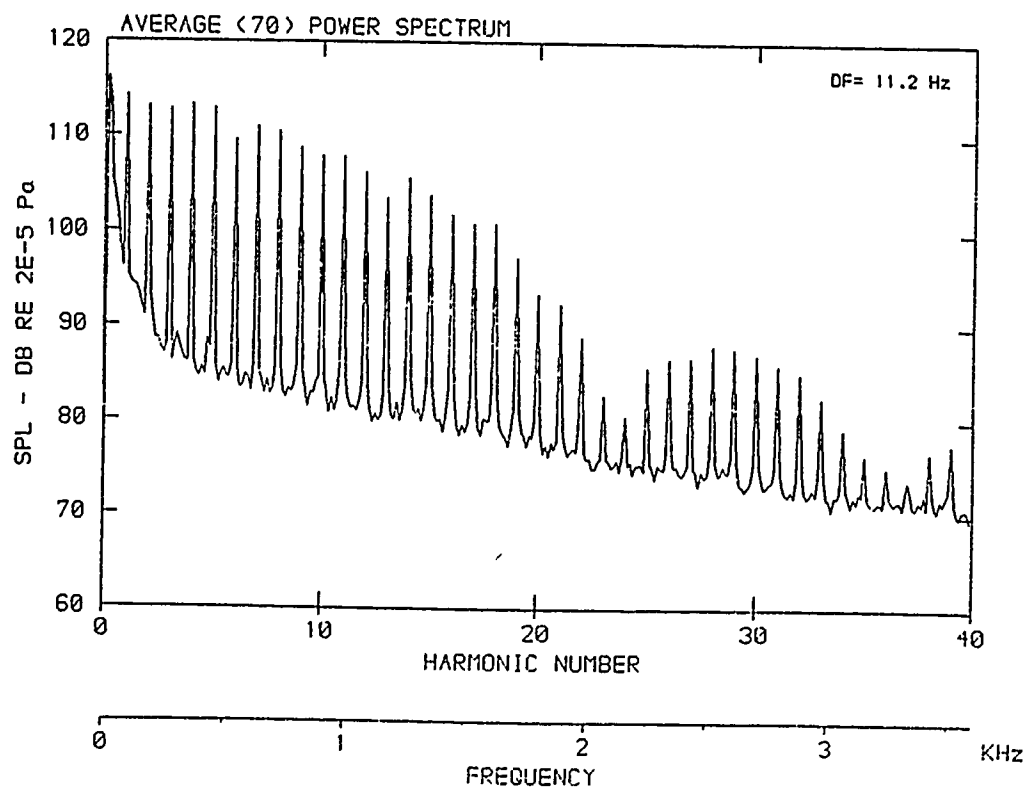
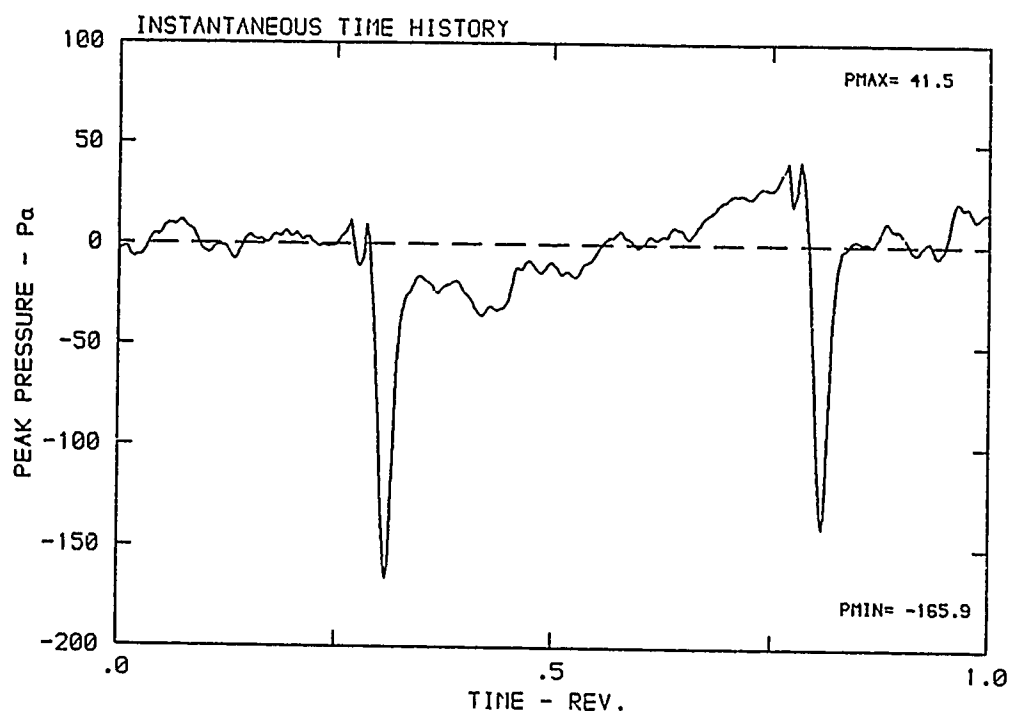
DATA POINT: AN-5      RUN: 66      MP: 2

$\beta$ :  $20.8^\circ$     MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ :  $.0^\circ$     T: 289.4 K



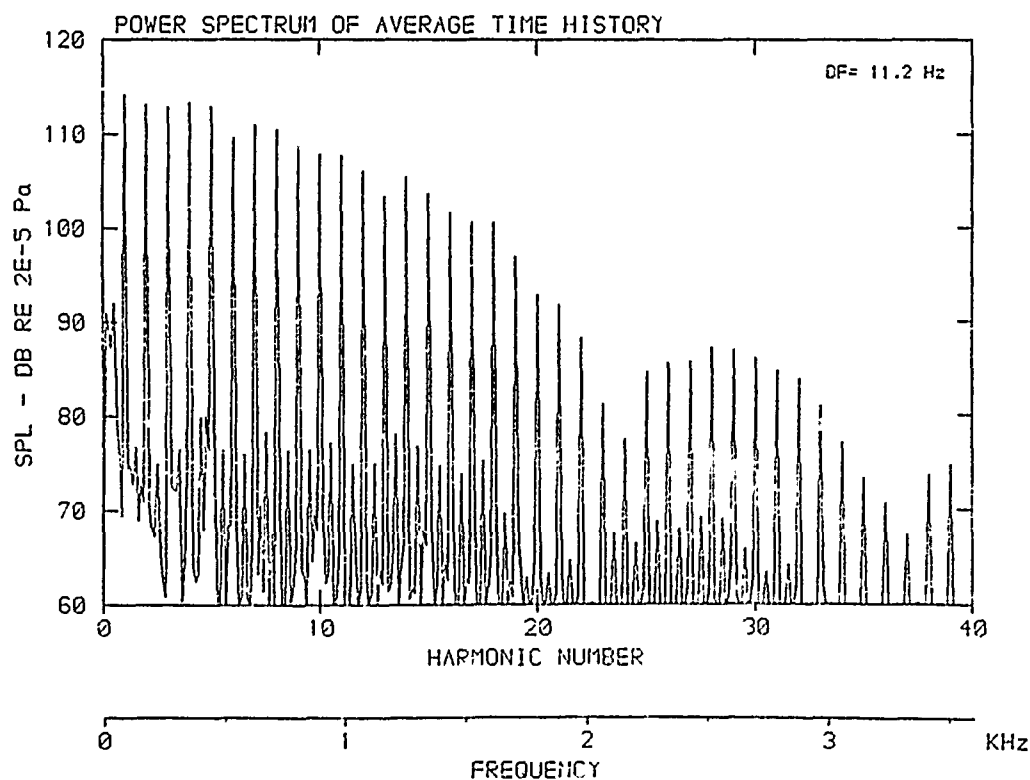
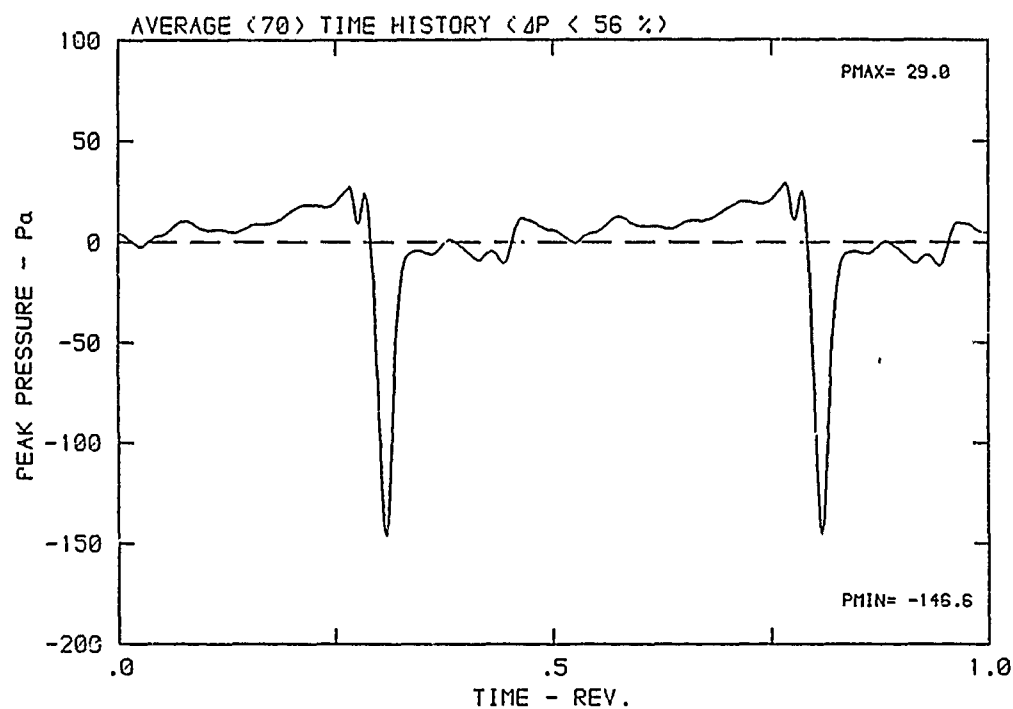
DATA POINT: AN-5    RUN: 66    MP: 3

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



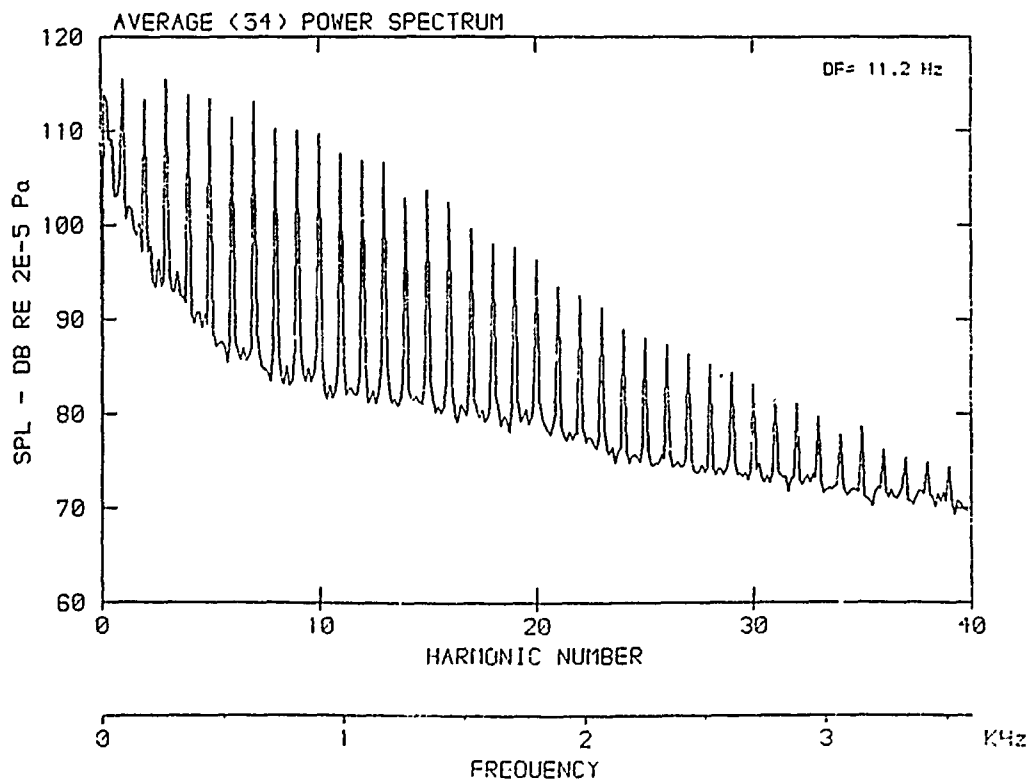
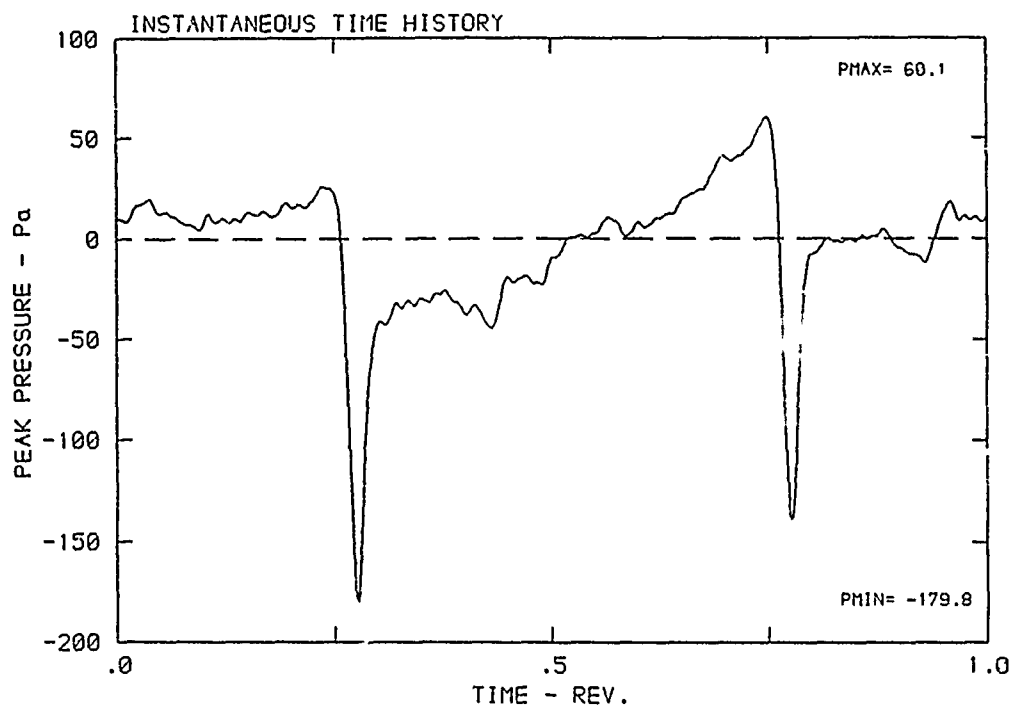
DATA POINT: AN-5 RUN: 66 MP: 3

$\beta$ : 20.8° MH: .8720 n: 2700 rpm v/u: .268  $\phi$ : .0° T: 289.4 K



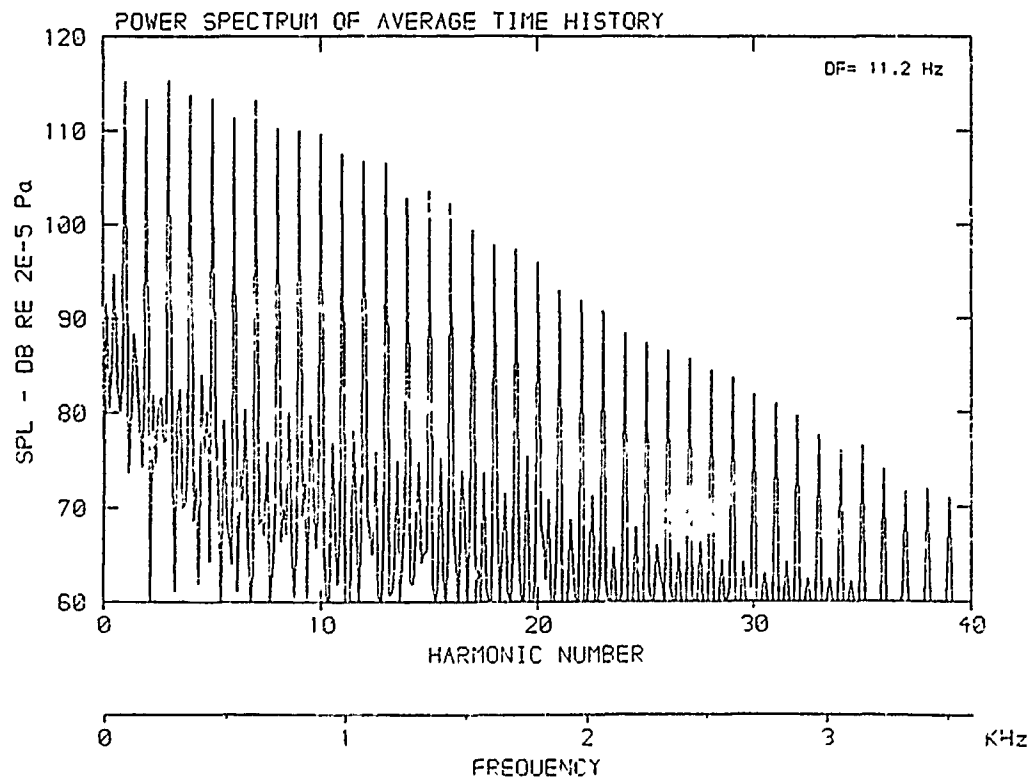
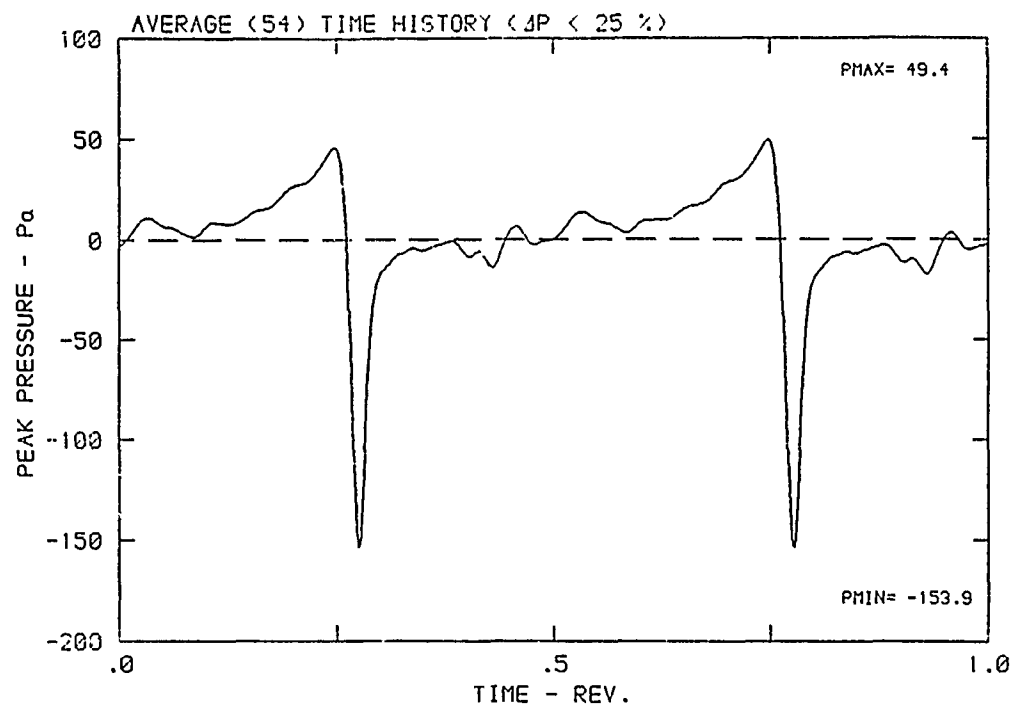
DATA POINT: AN-5    RUN: 65    MP: 4

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\rho$ : .00    T: 289.4 K



DATA POINT: AN-5      RUN: 66      MP: 4

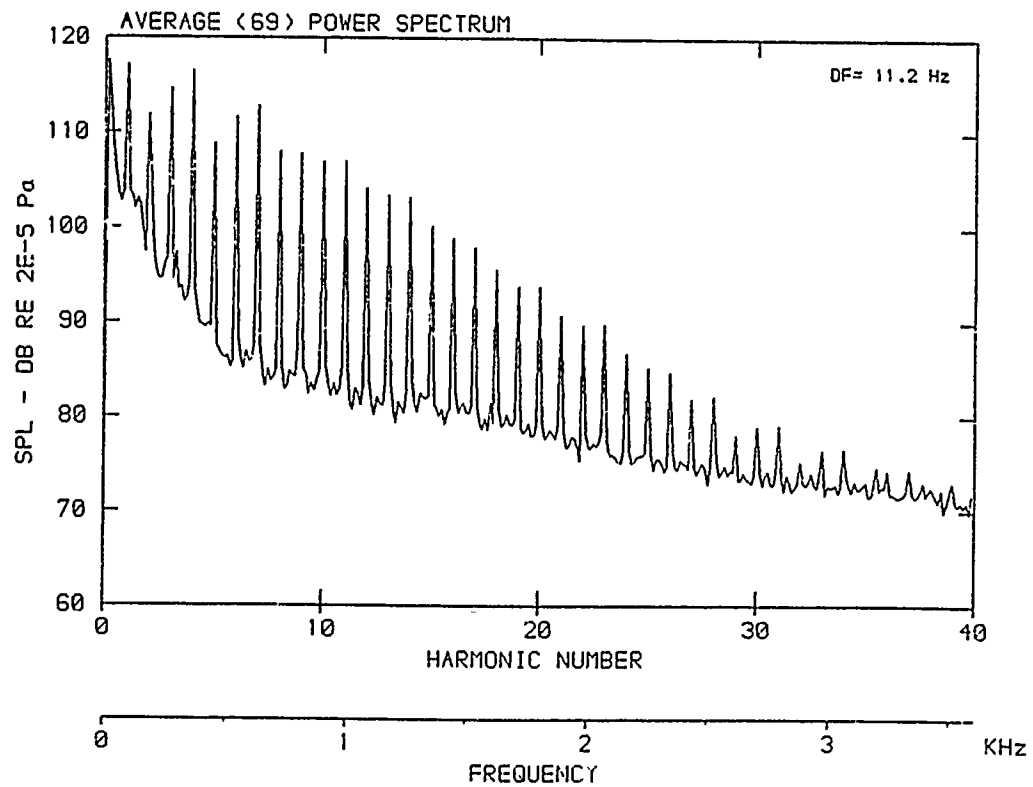
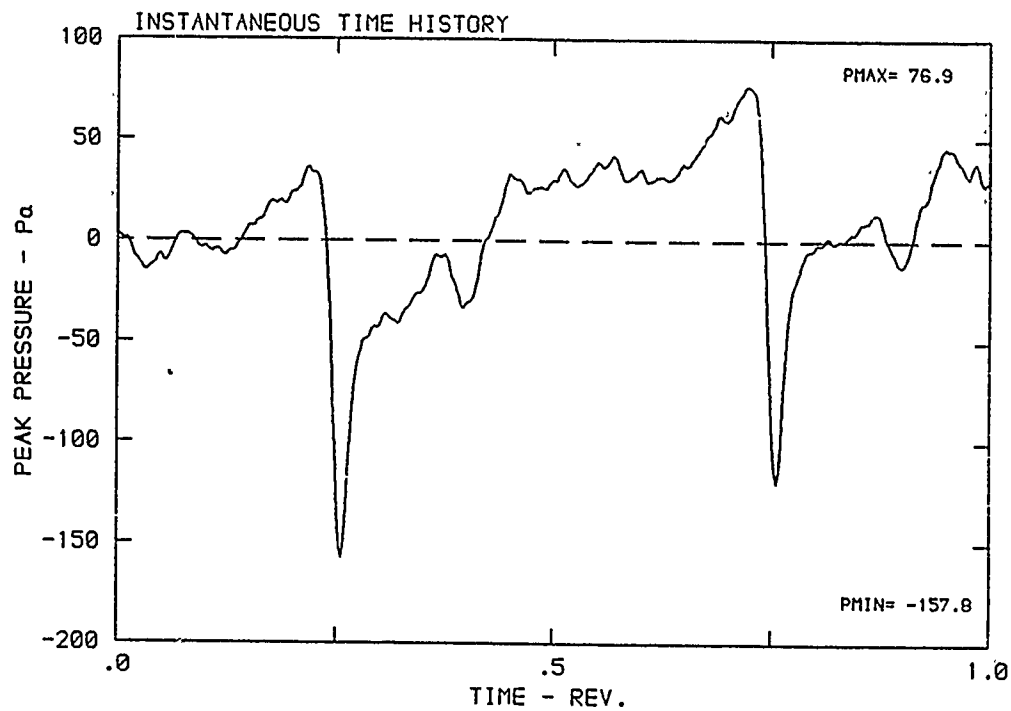
$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K





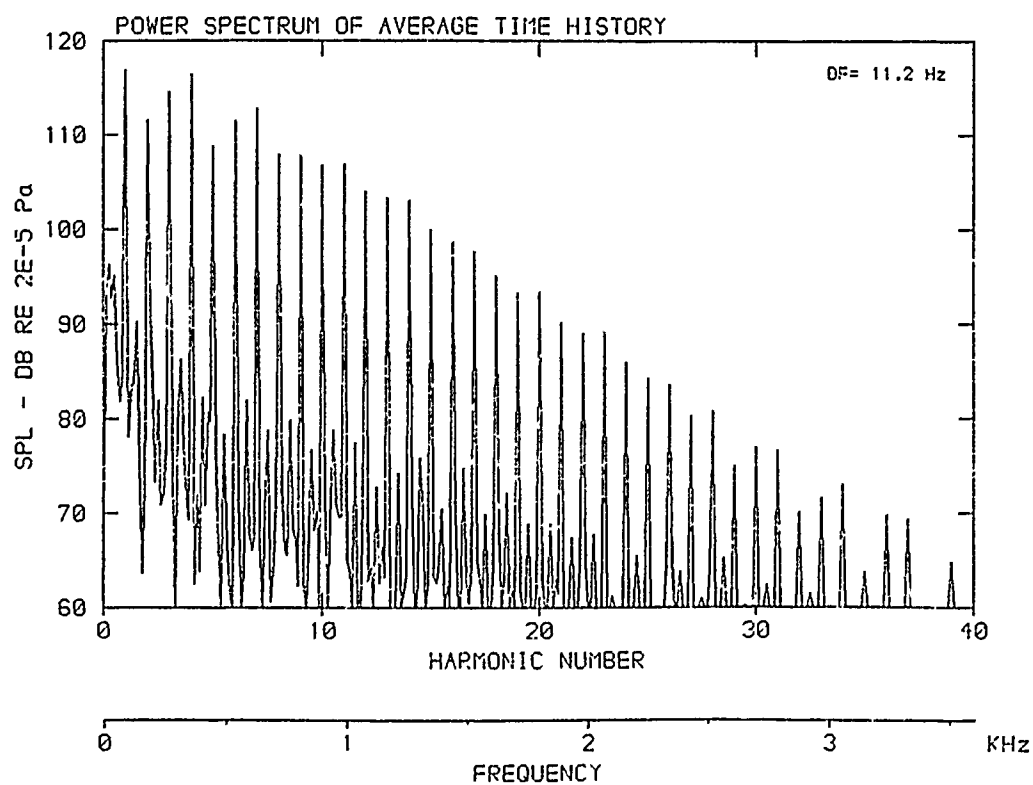
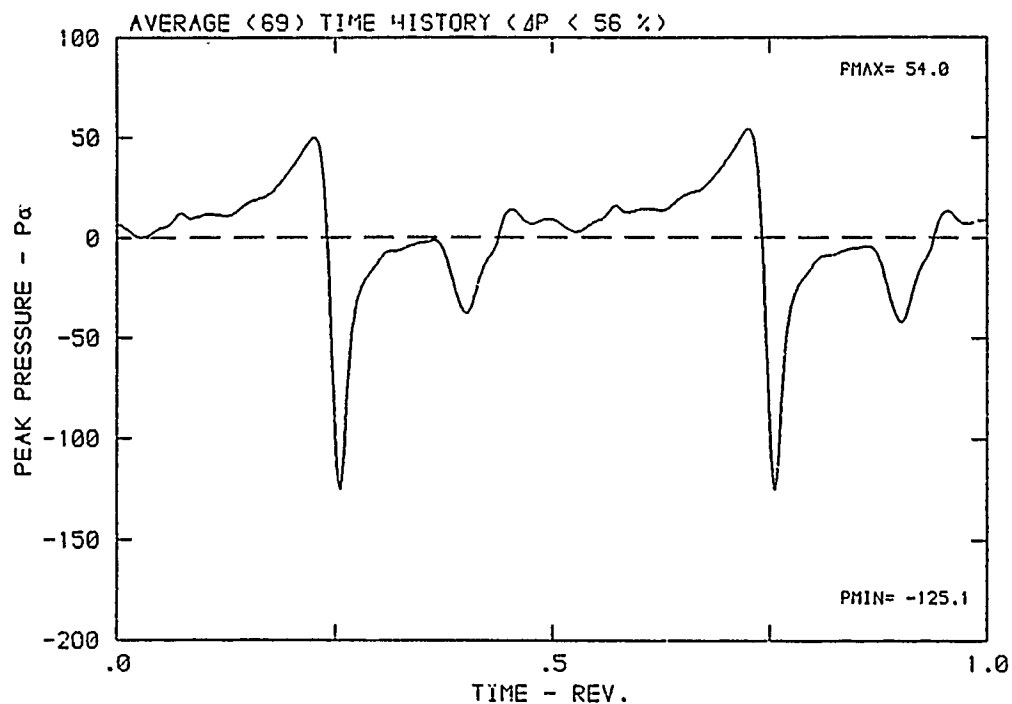
DATA POINT: AN-5    RUN: 66    MP: 5

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



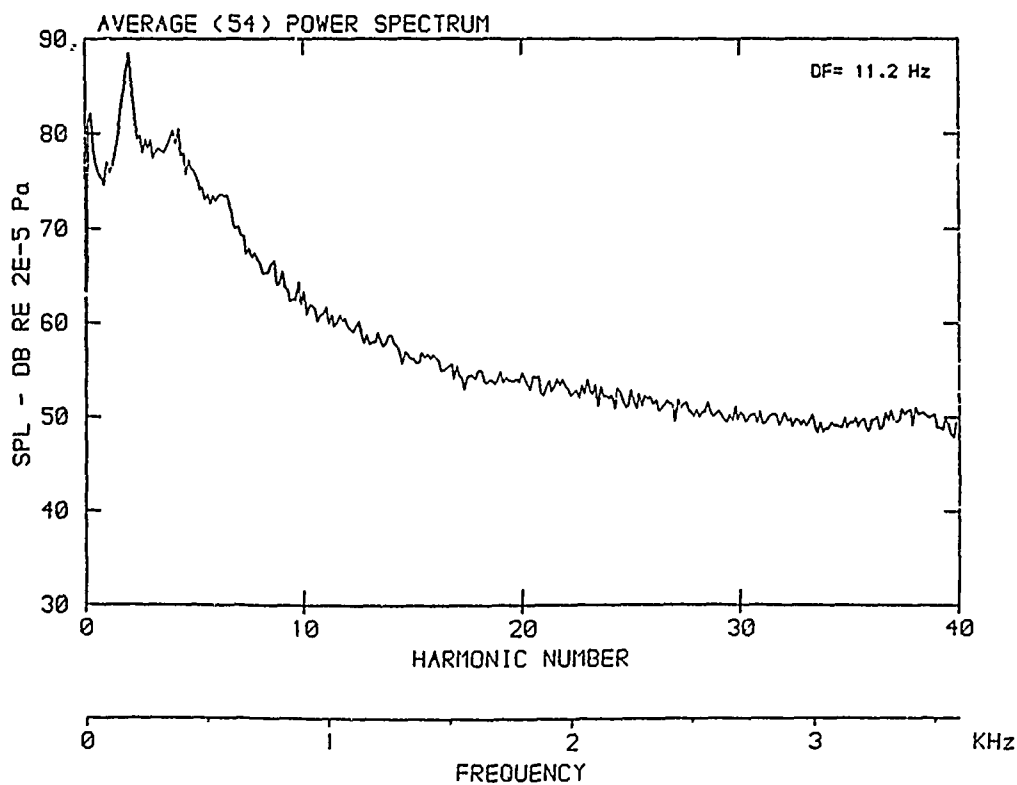
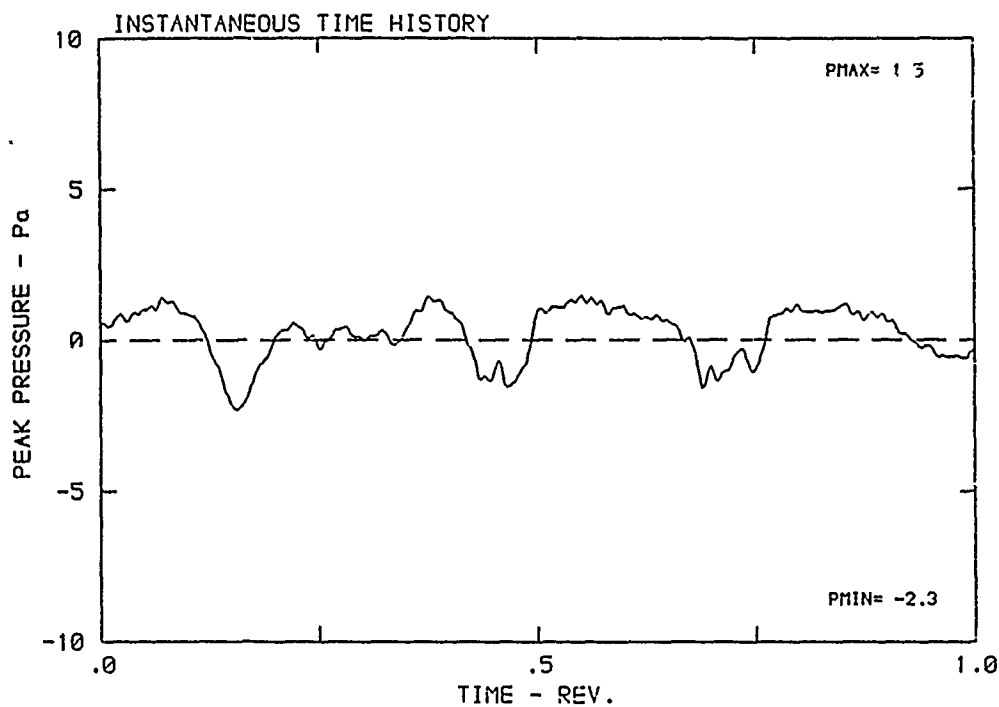
DATA POINT: AN-5      RUN: 66      MP: 5

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



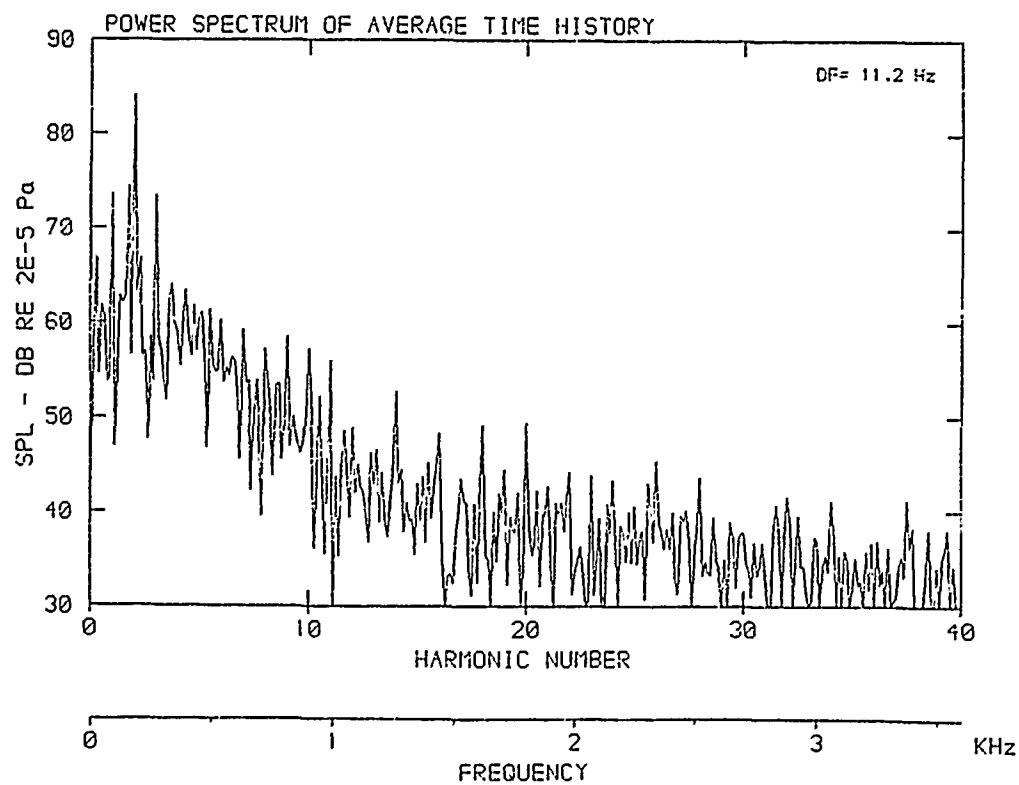
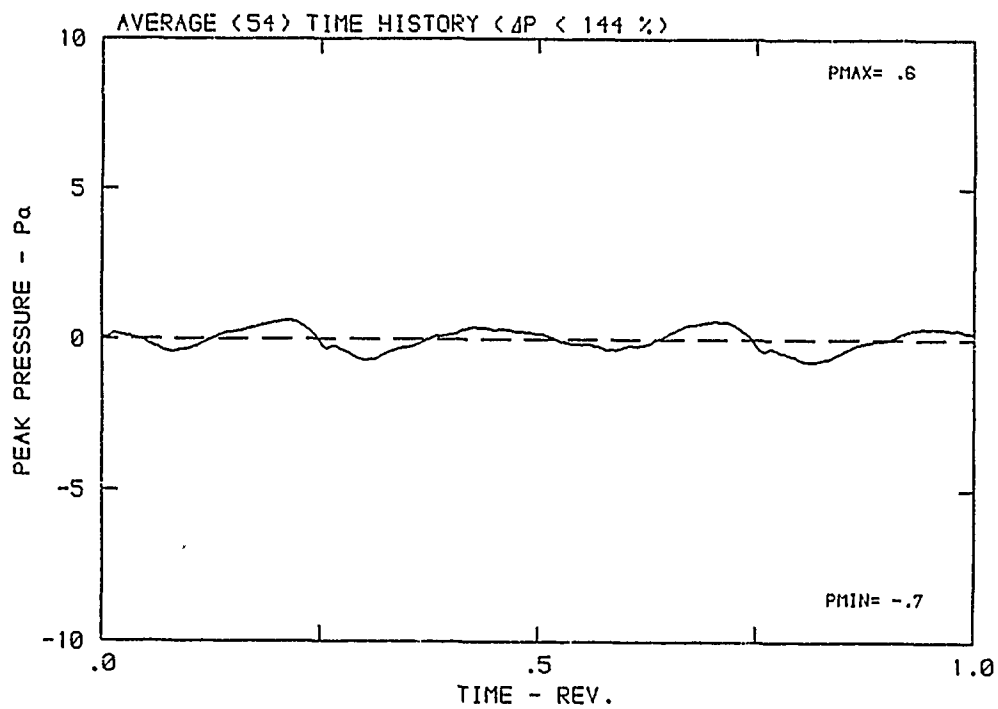
DATA POINT: AN-5    RUN: 66    MP: 6

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



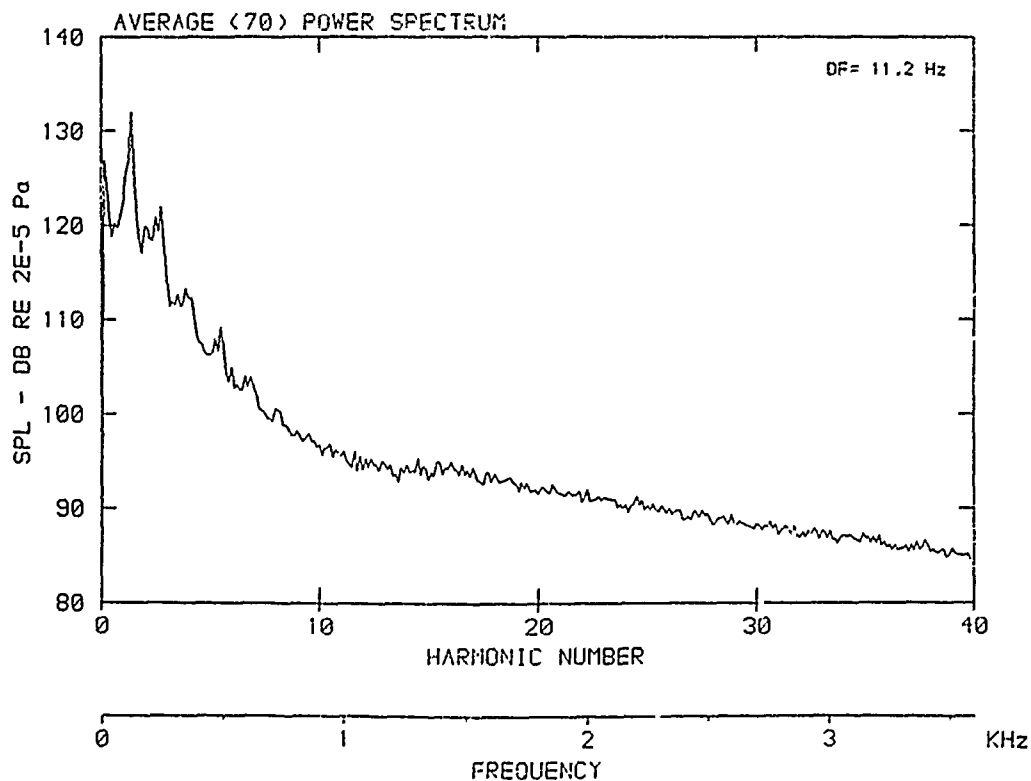
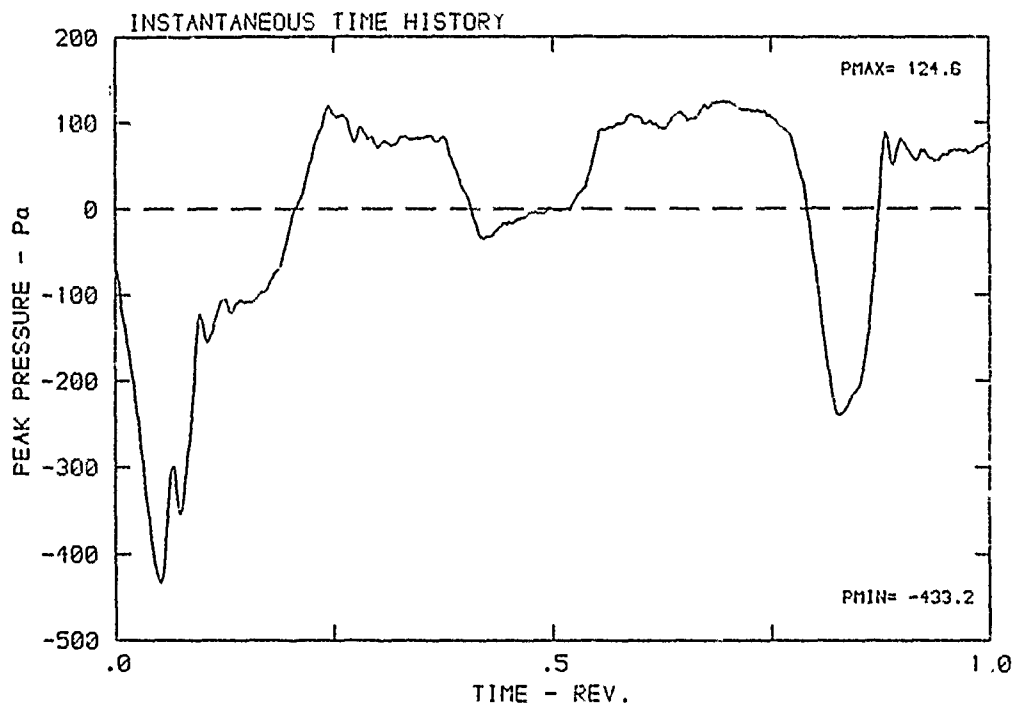
DATA POINT: AN-5      RUN: 66      MP: 6

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



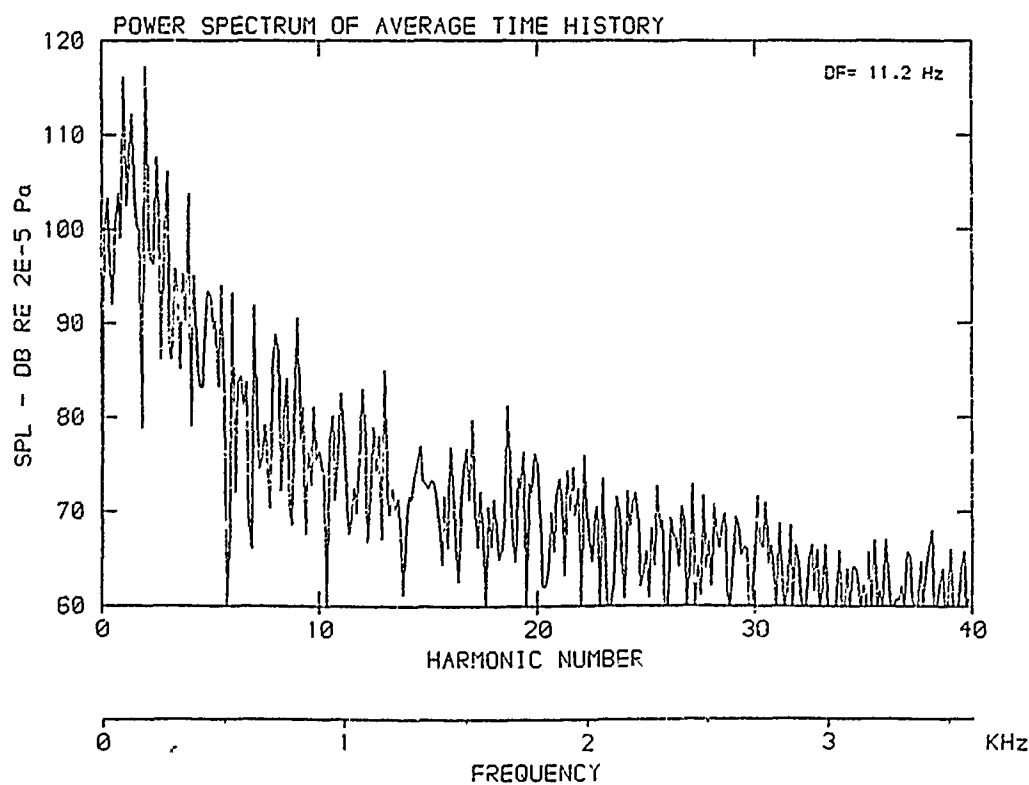
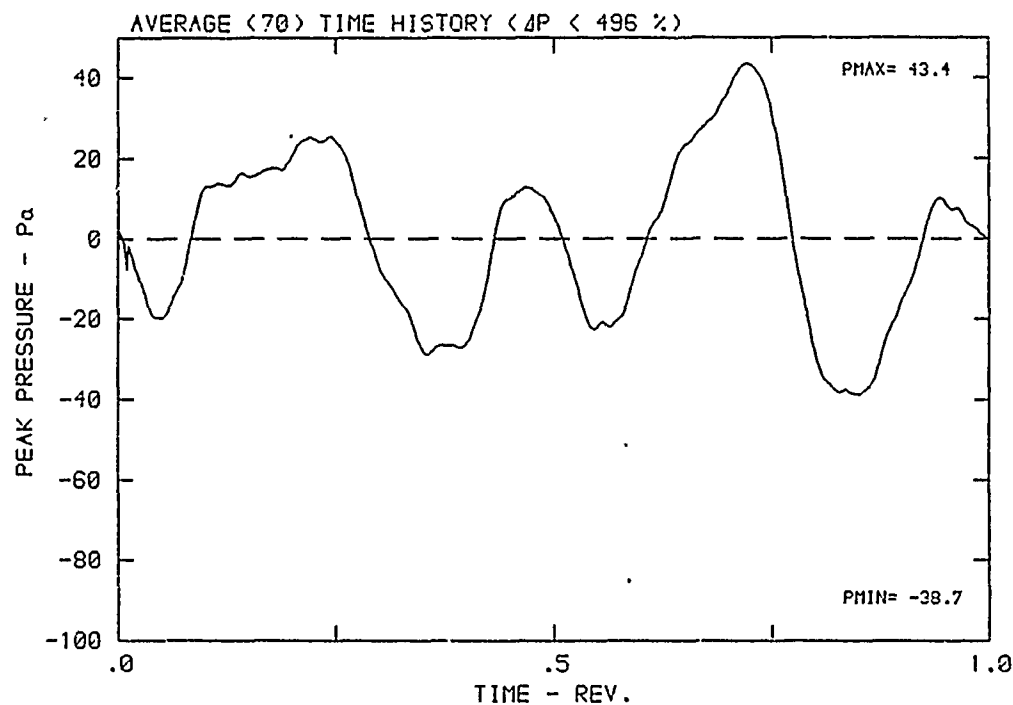
DATA POINT: AN-5 RUN: 66 MP: 7

$\beta$ : 20.8° MH: .8720 n: 2700 rpm  $v/u$ : .268  $\phi$ : .0° T: 269.4



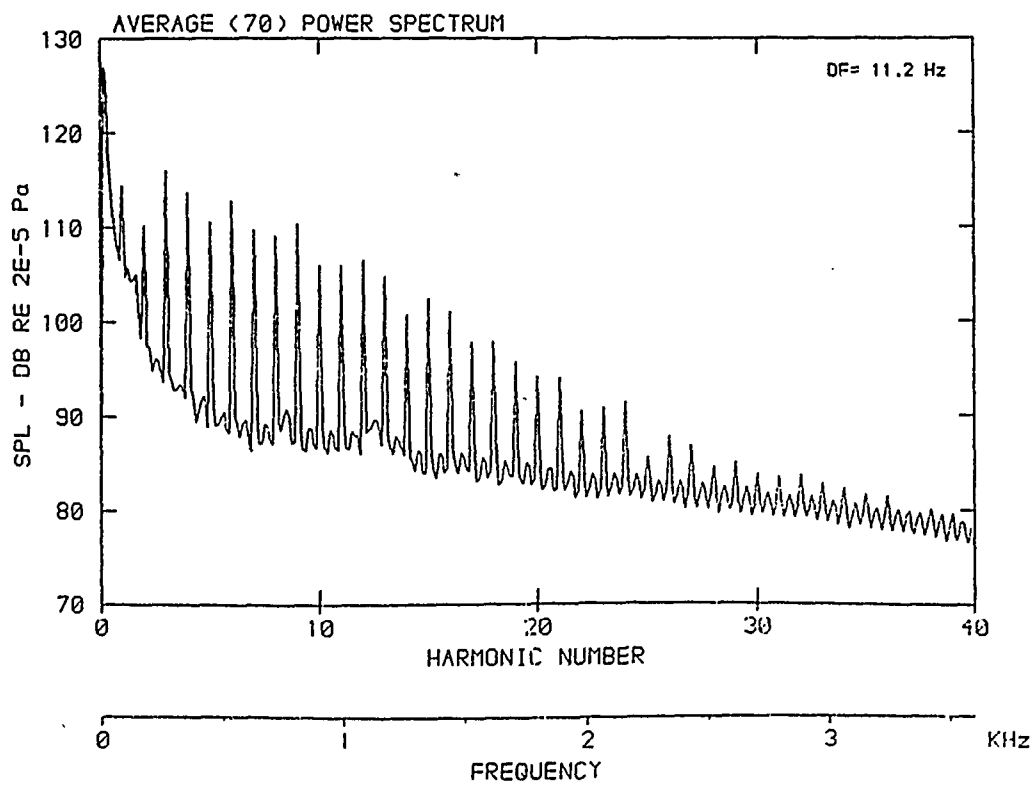
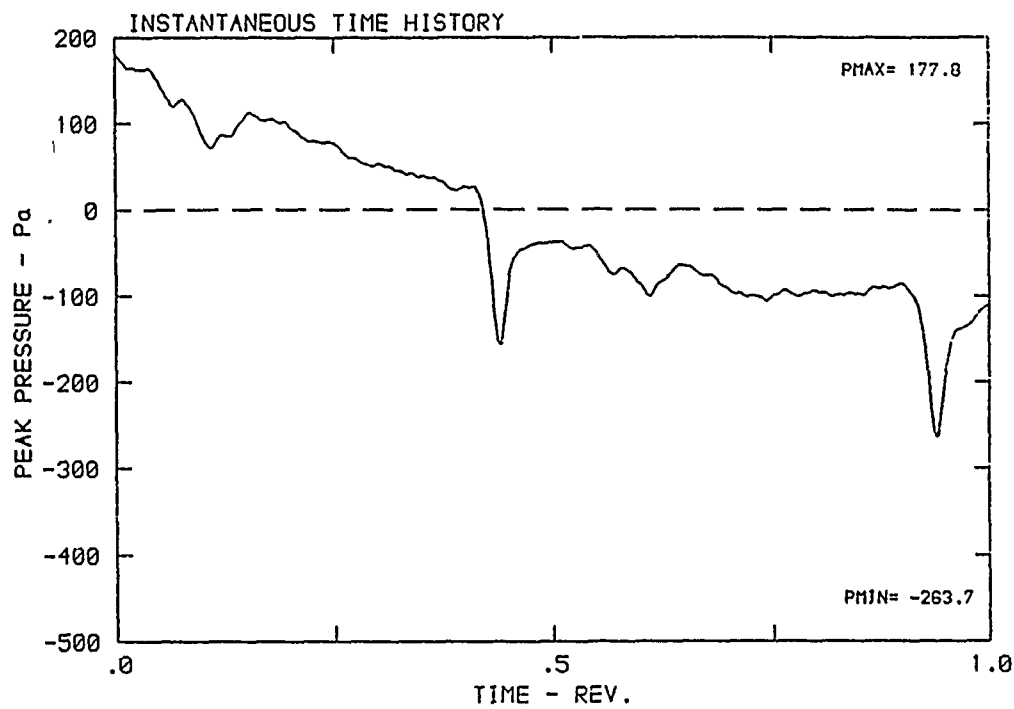
DATA POINT: AN-5    RUN: 66    MP: 7

$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K



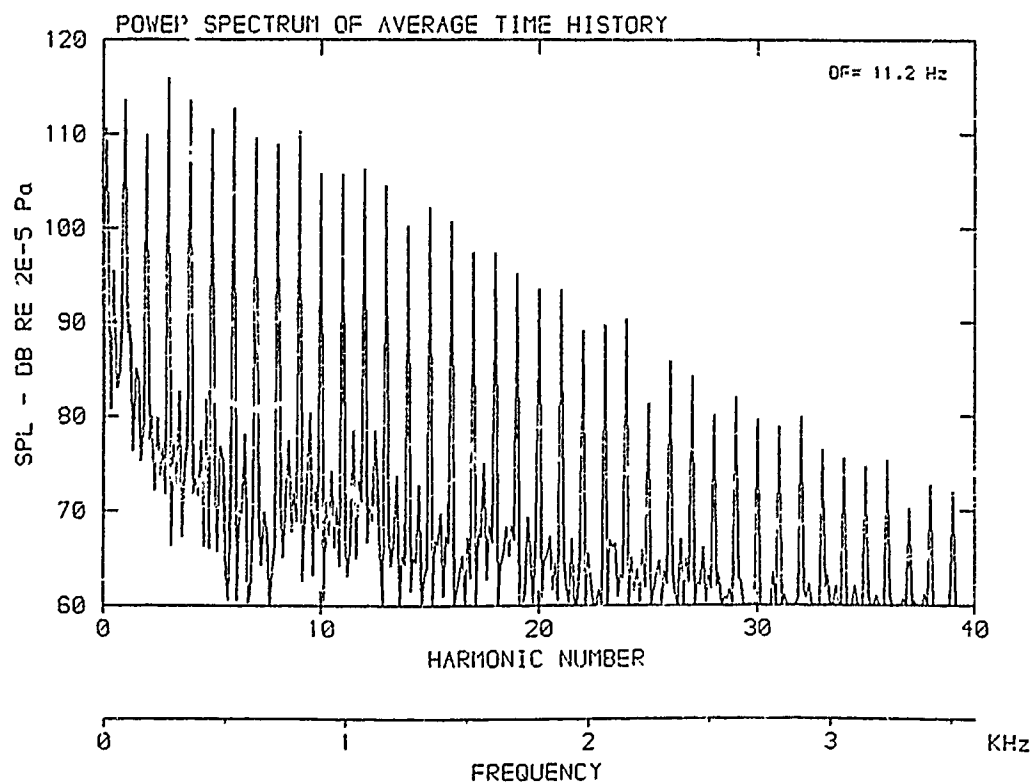
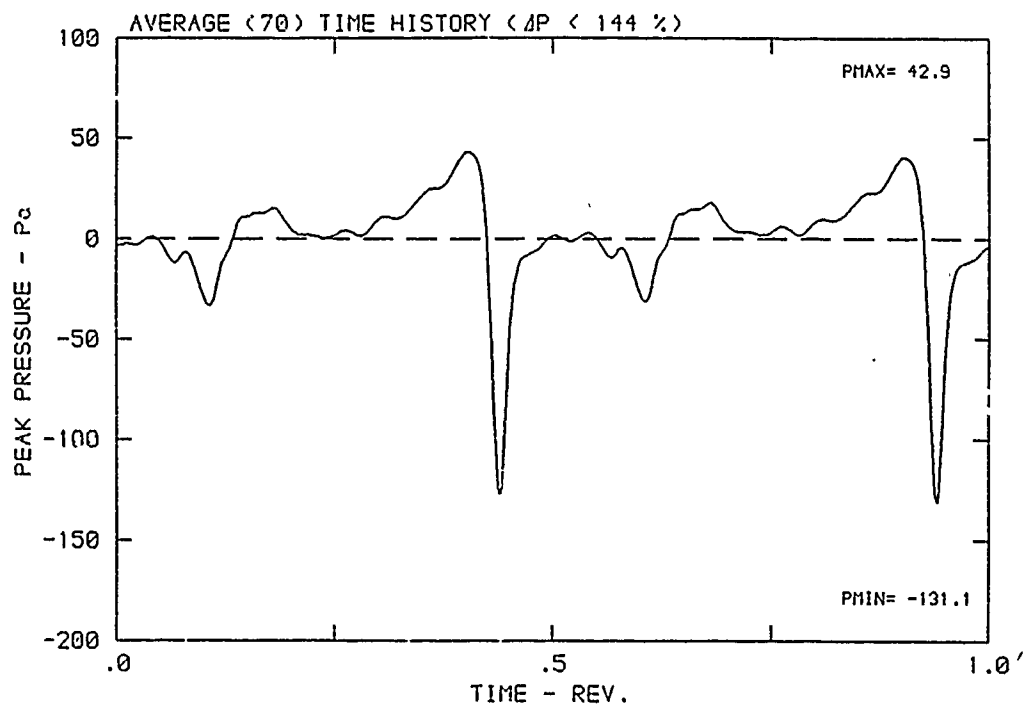
DATA POINT: AN-5 RUN: 66 MP: 9

$\beta$ : 20.8° MH: .8720 n: 2700 rpm v/u: .268  $\phi$ : .0° T: 289.4 K



DATA POINT: AN-5      RUN: 66      MP: 9

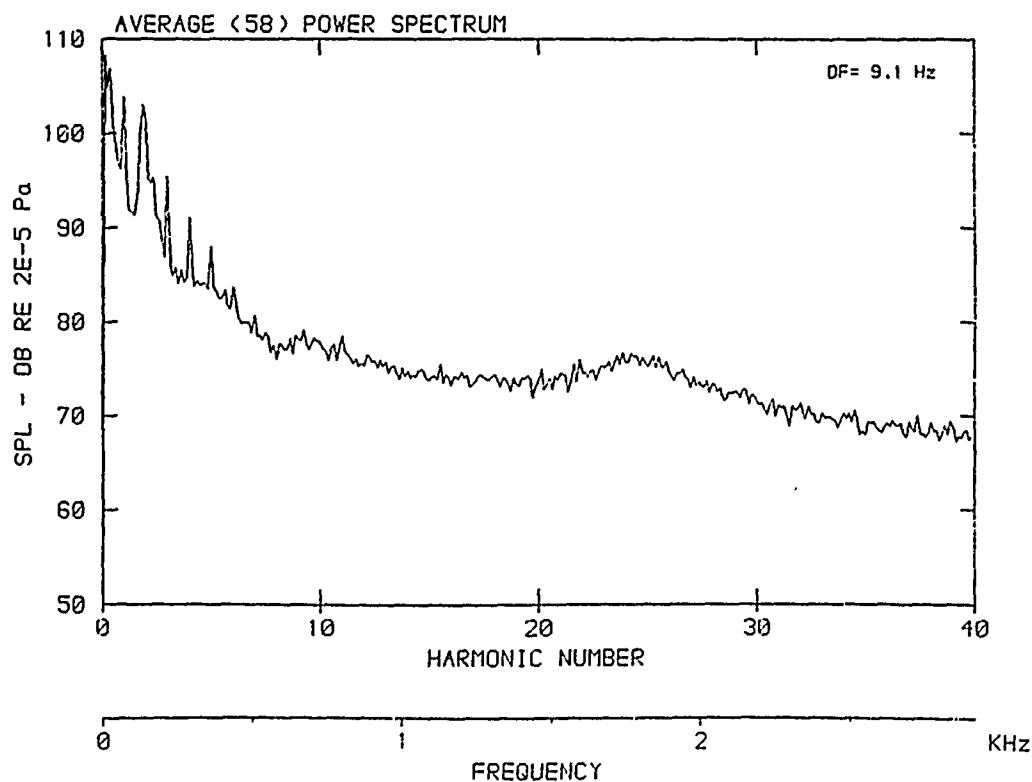
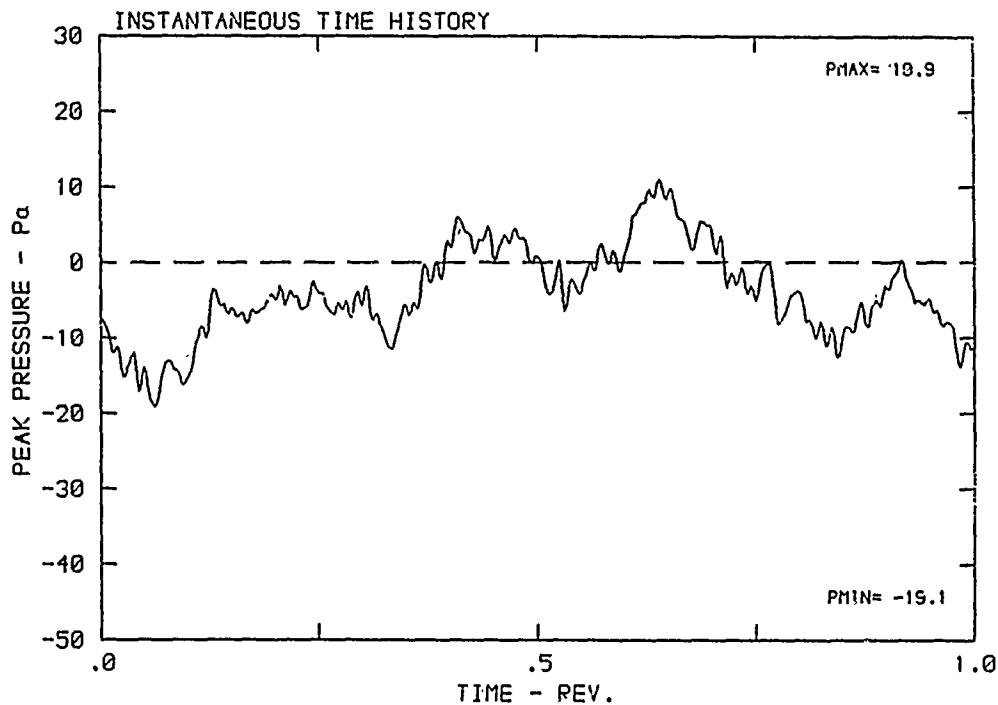
$\beta$ : 20.8°    MH: .8720    n: 2700 rpm    v/u: .268     $\phi$ : .0°    T: 289.4 K





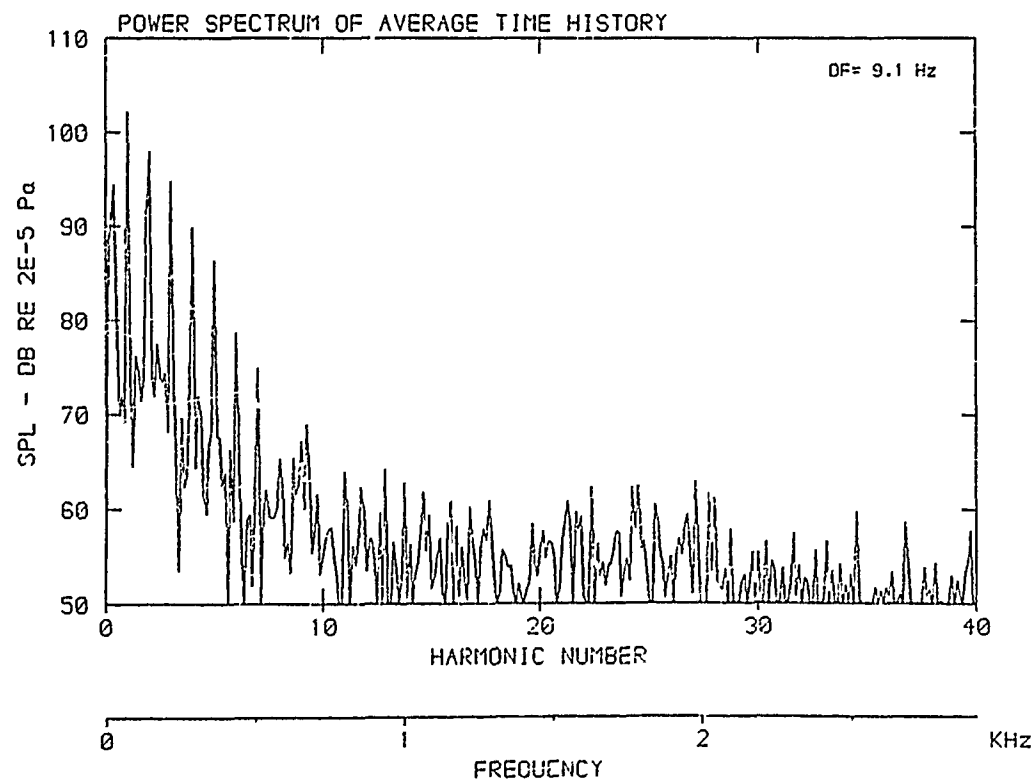
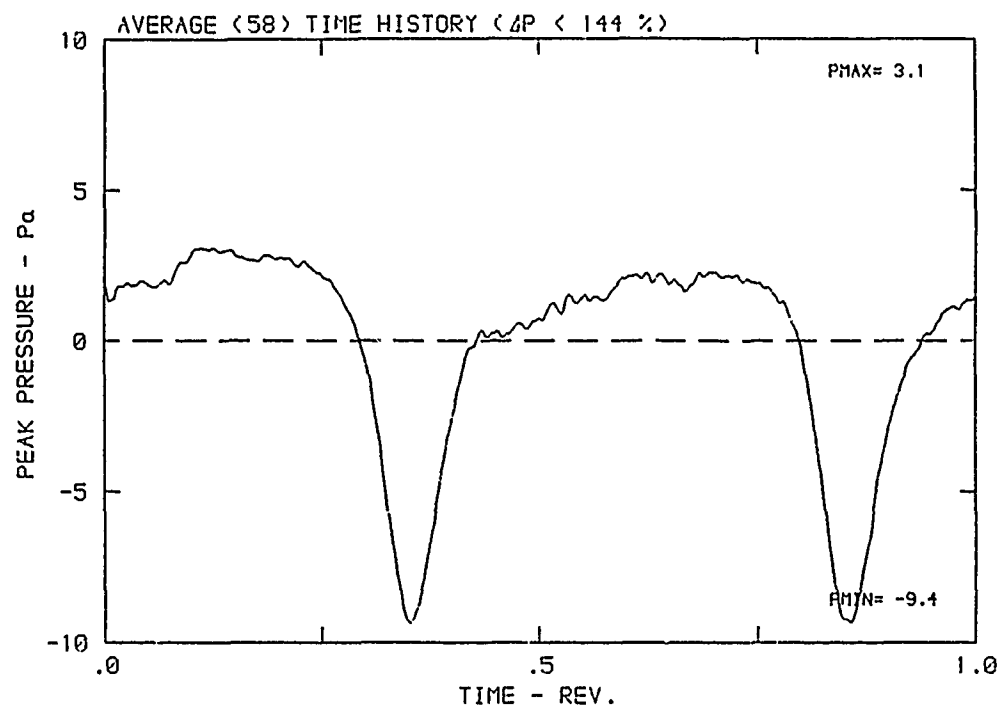
DATA POINT: AN-7 RUN: 68 MP: 1

$\beta$ : 20.8° MH: .7174 n: 2189 rpm v/u: .331  $\phi$ : .0° T: 291.0 K



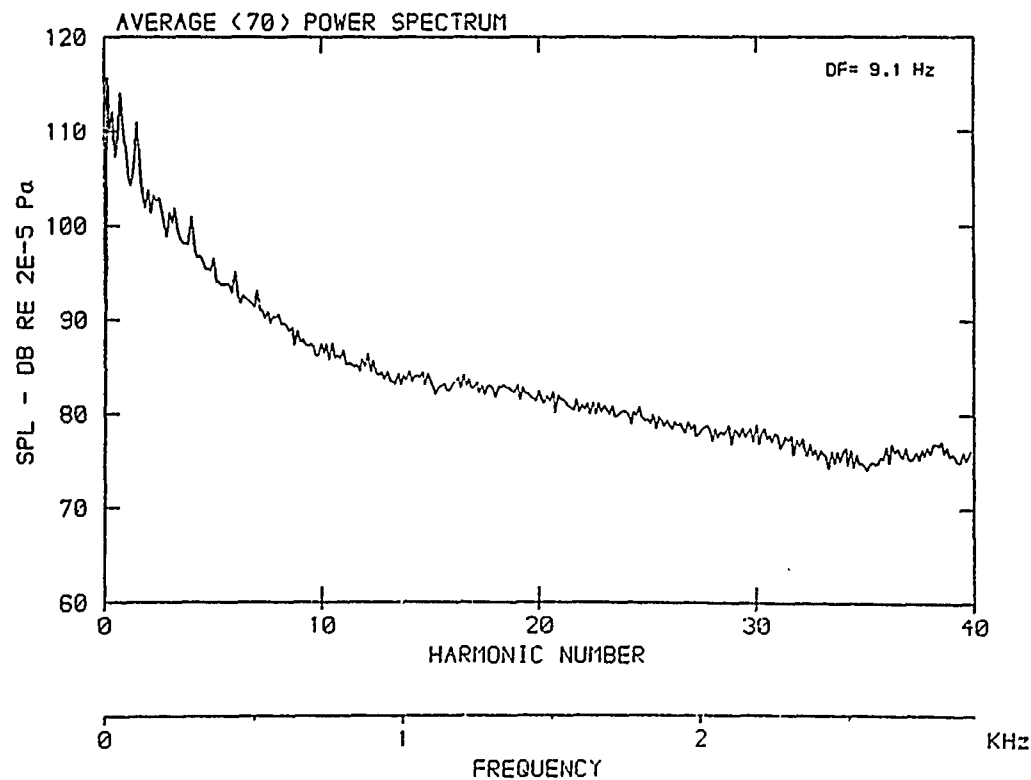
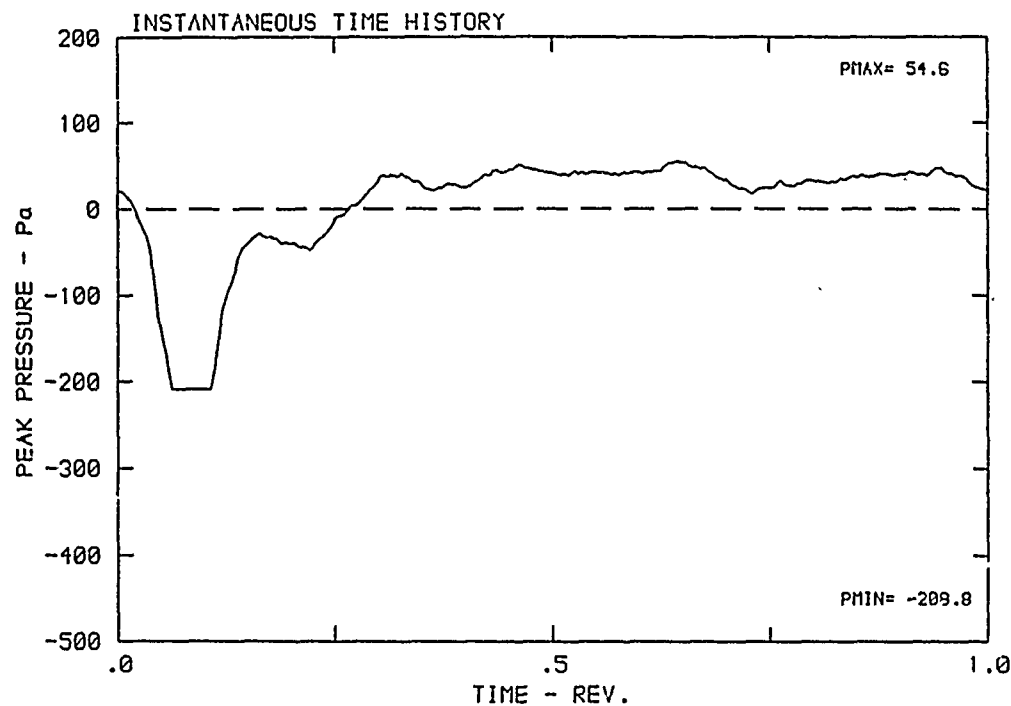
DATA POINT: AN-7    RUN: 68    MP: 1

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K



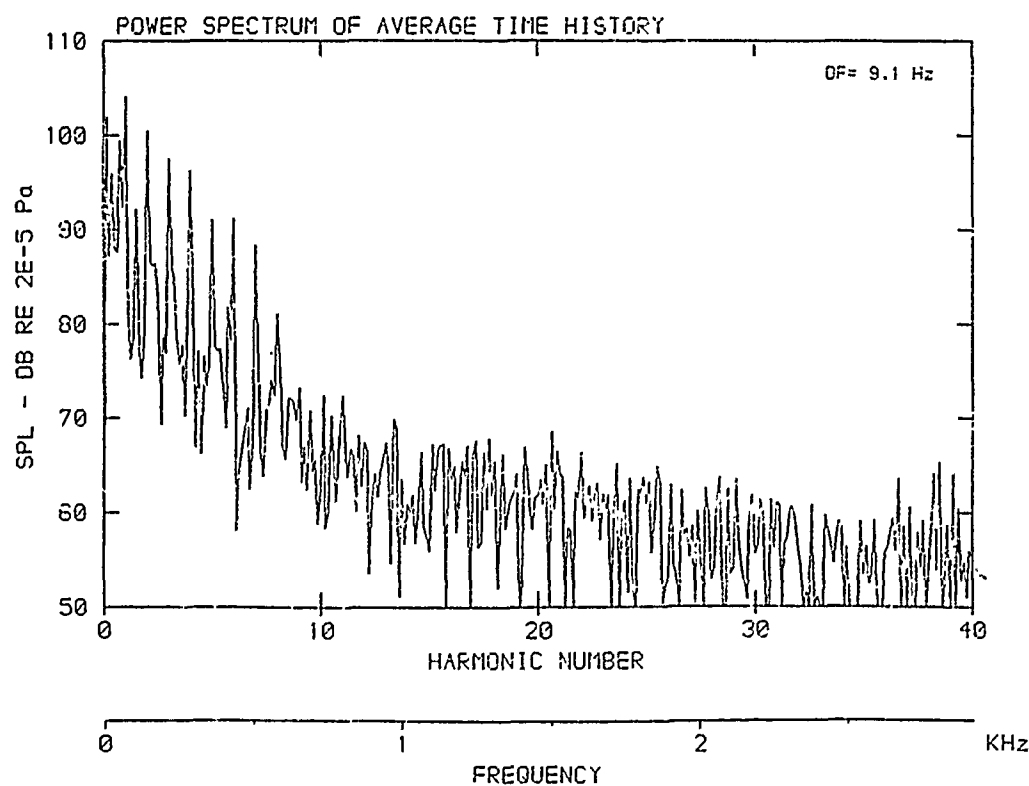
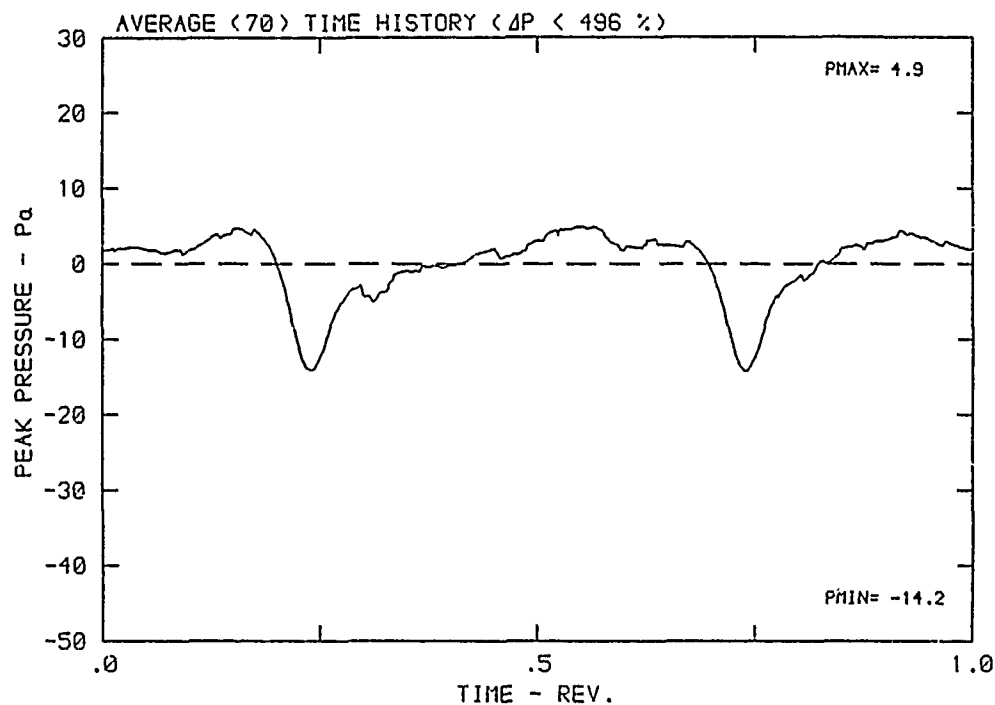
DATA POINT: AN-7    RUN: 68    MP: 2

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K



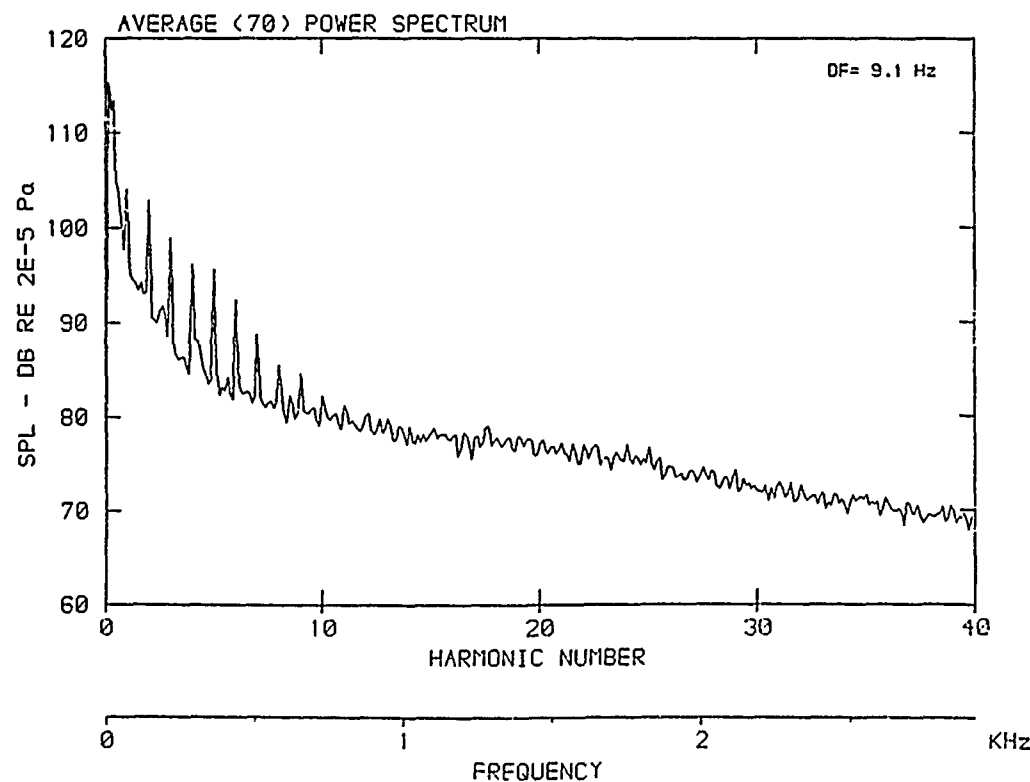
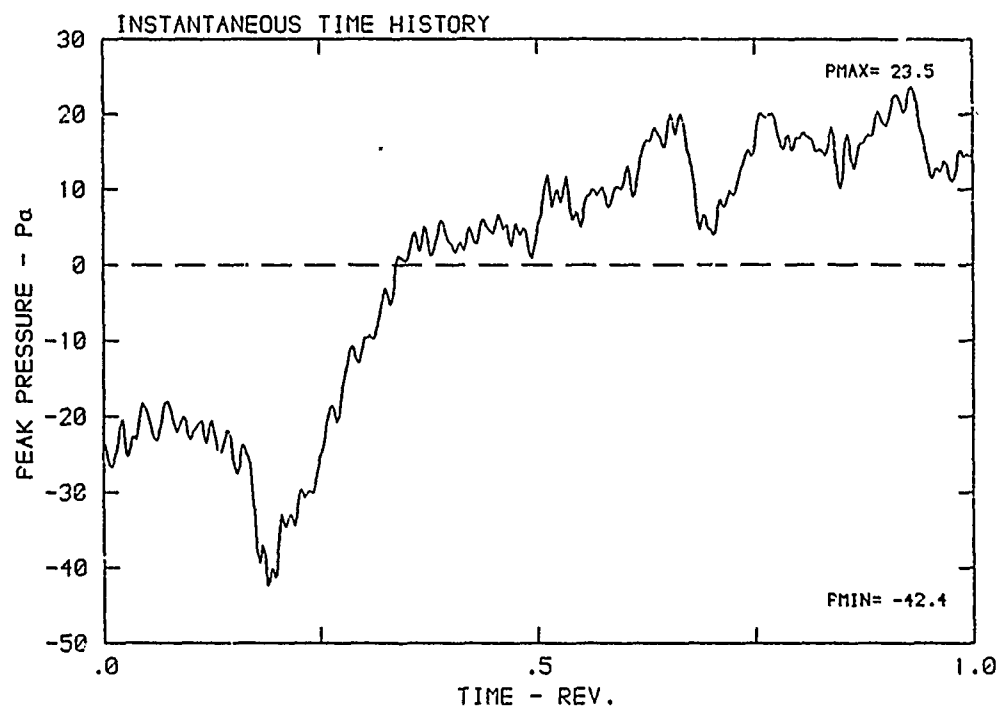
DATA POINT: AN-7      RUN: 68      MP: 2

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K



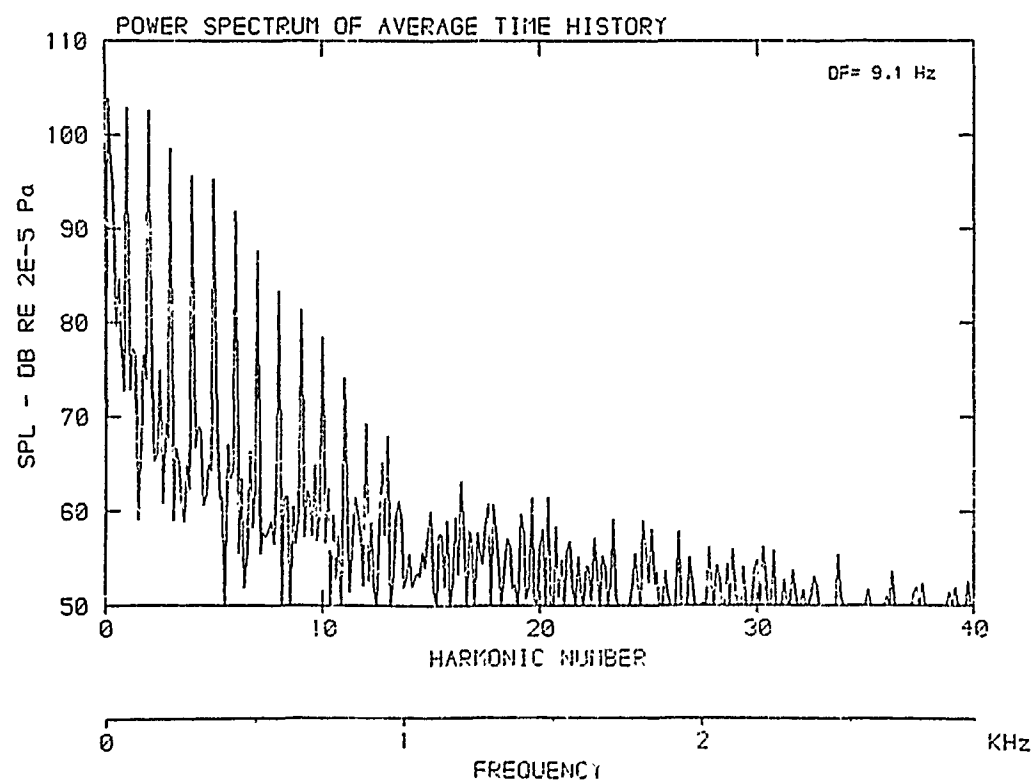
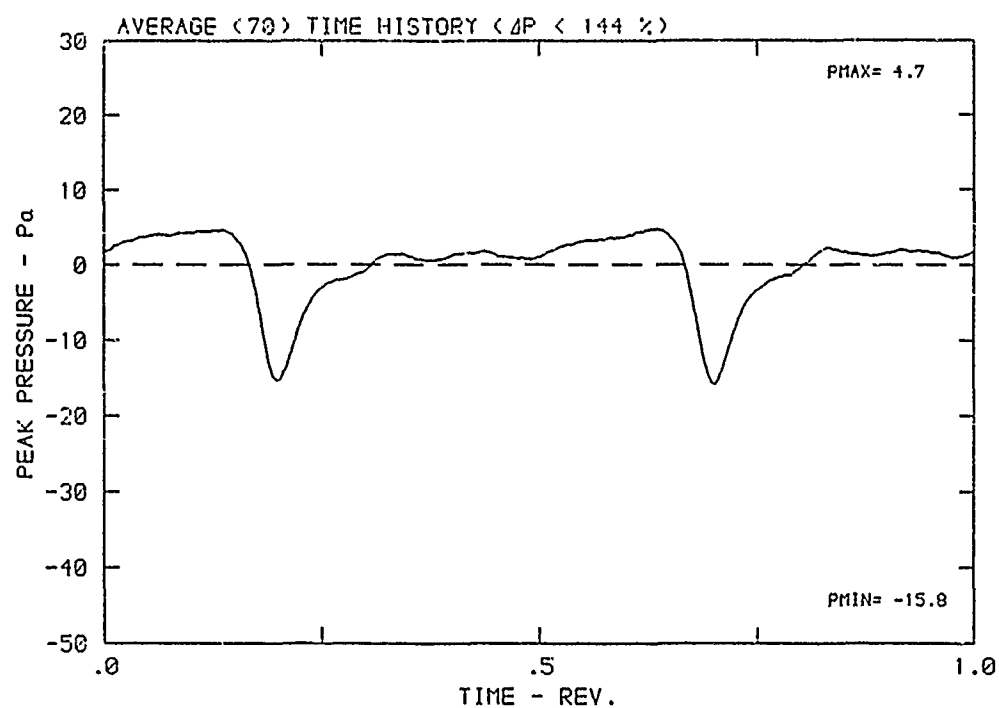
DATA POINT: AN-7    RUN: 68    MP: 3

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm     $v/u$ : .331     $\phi$ : .0°    T: 291.0 K



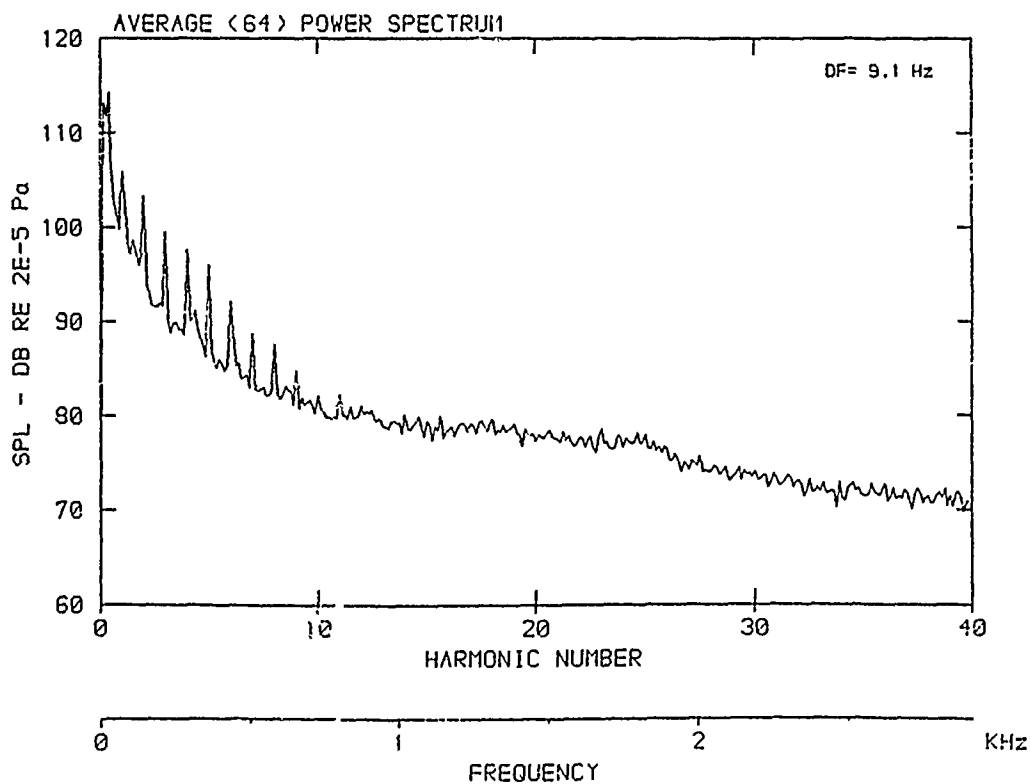
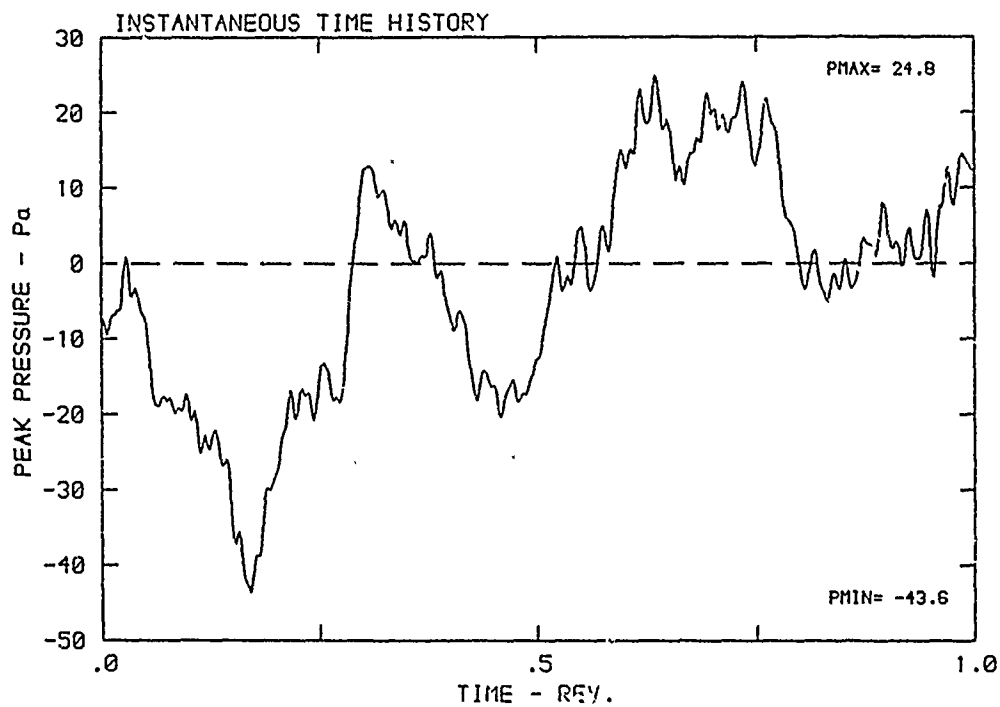
DATA POINT: AN-7      RUN: 68      MP: 3

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm     $v/u$ : .331     $\phi$ : .0°    T: 291.0 K



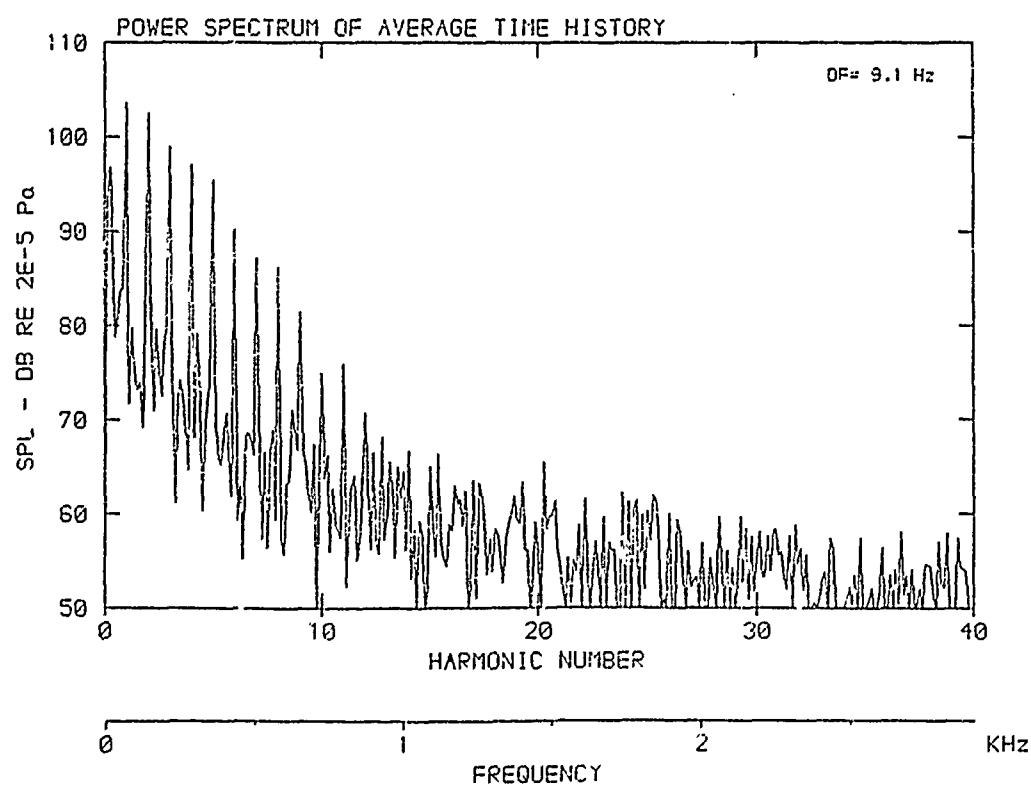
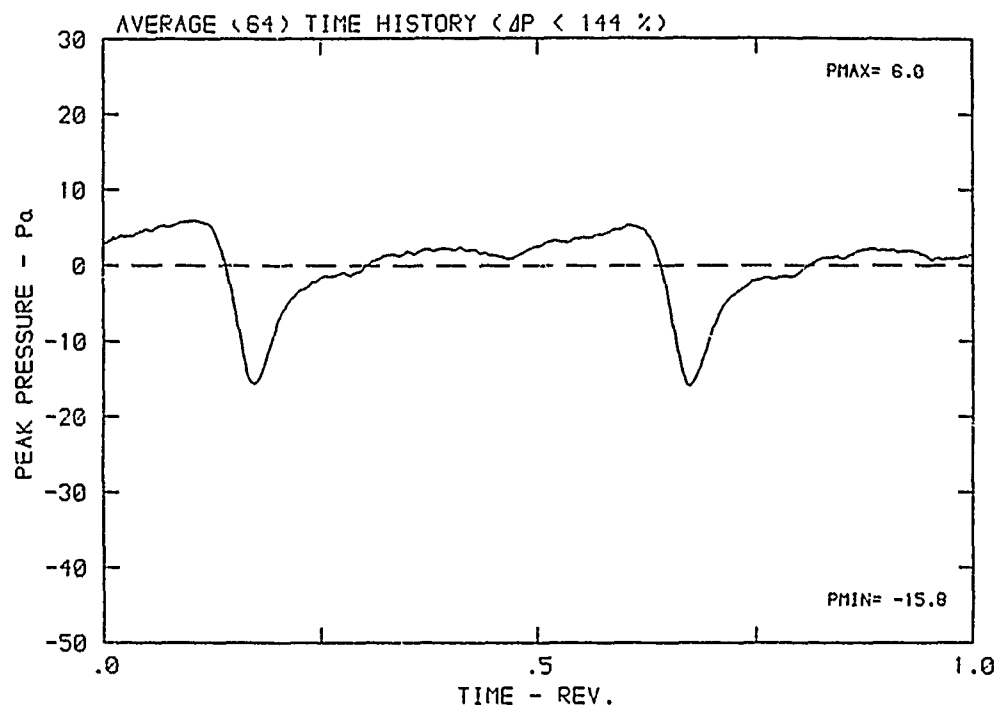
DATA POINT: AN-7      RUN: 68      MP: 4

$\beta$ : 29.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K



DATA POINT: AN-7      RUN: 68      MP: 4

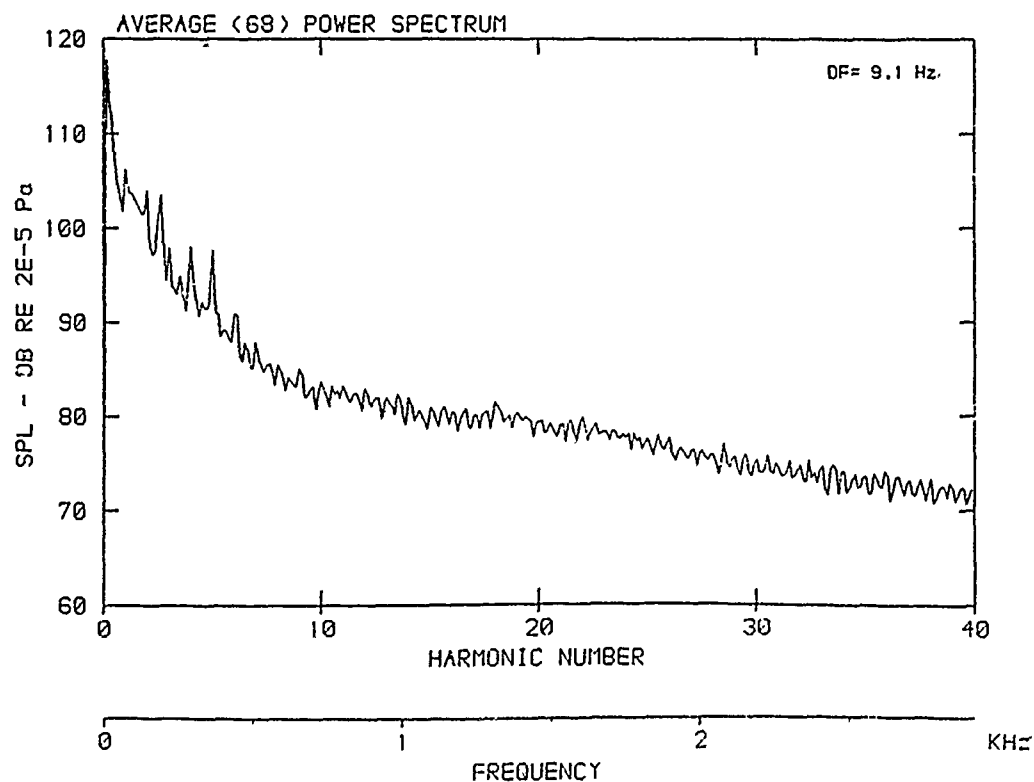
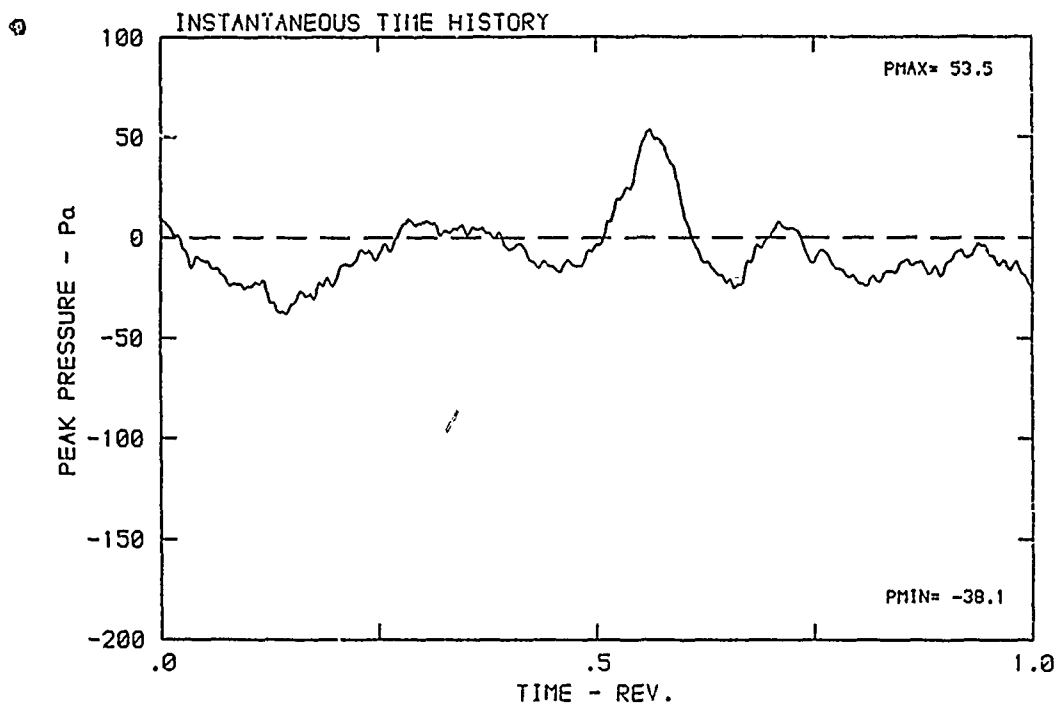
$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K





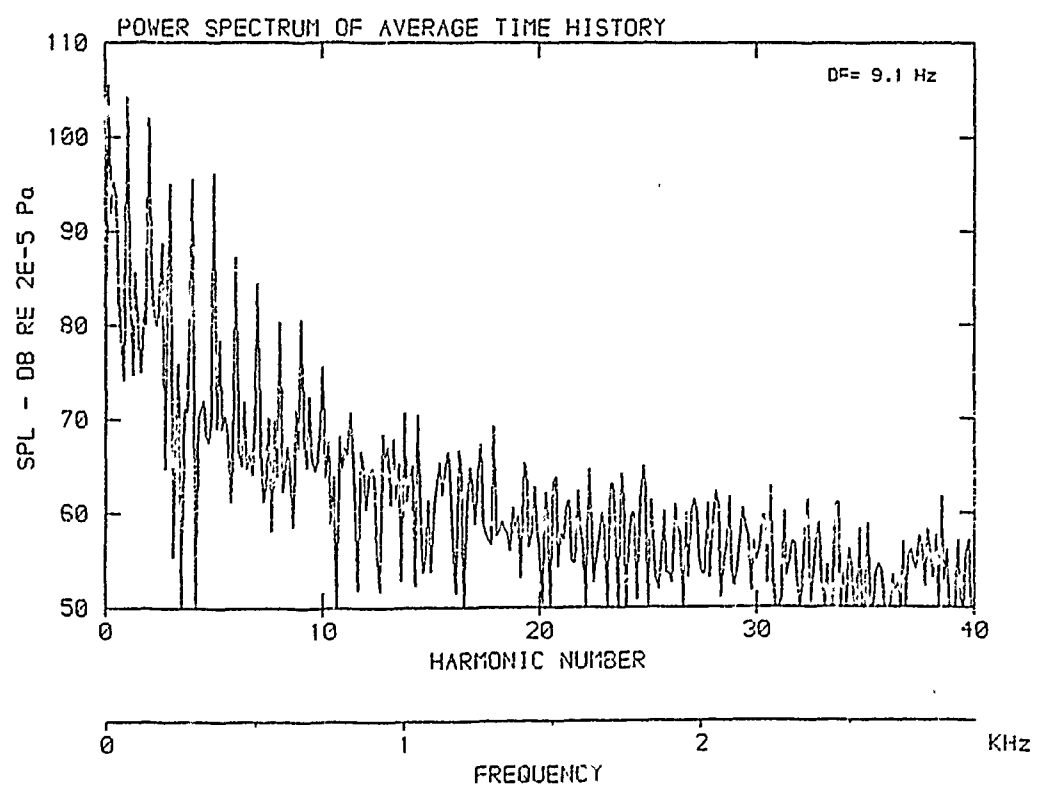
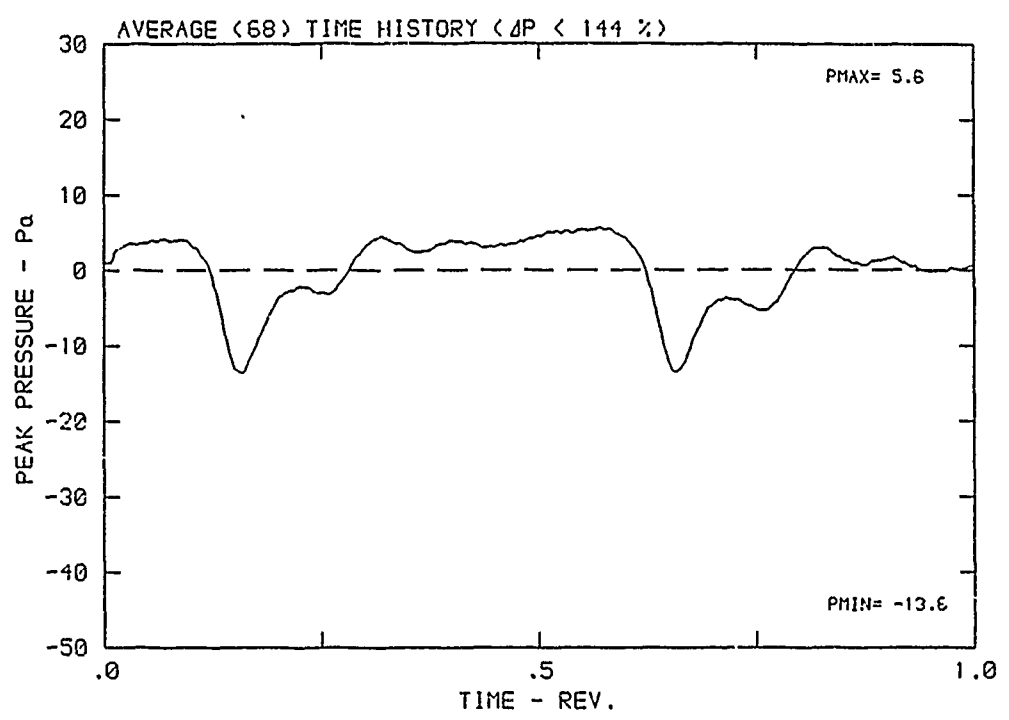
DATA POINT: AN-7    RUN: 68    MP: 5

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 231.6 Y



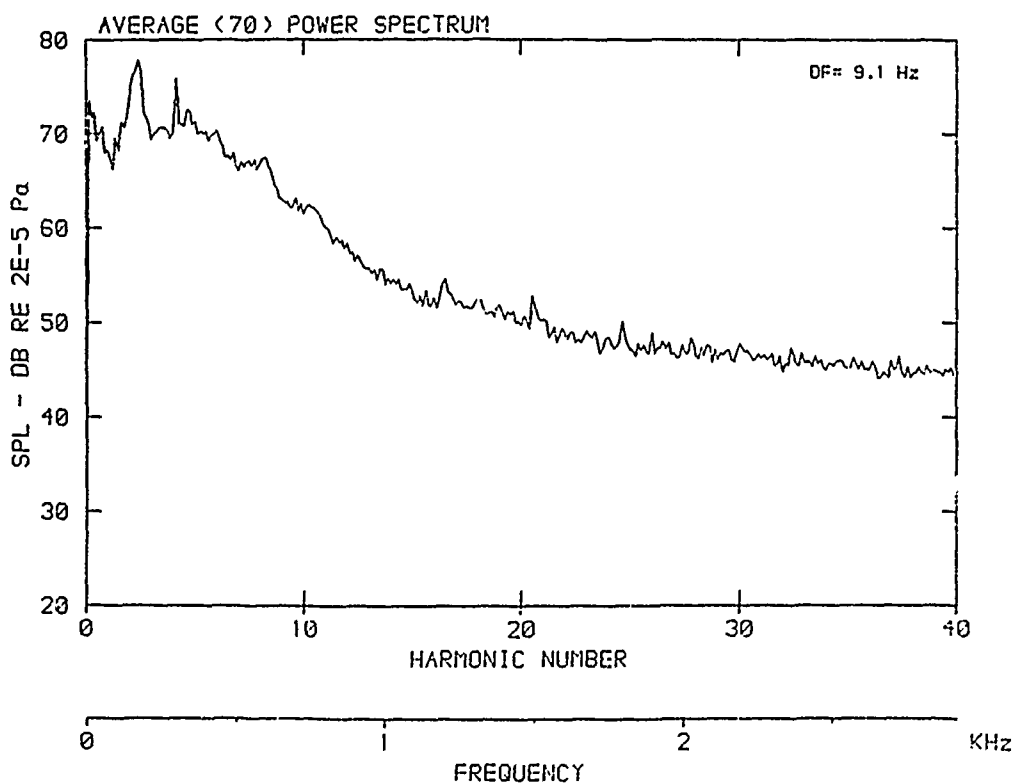
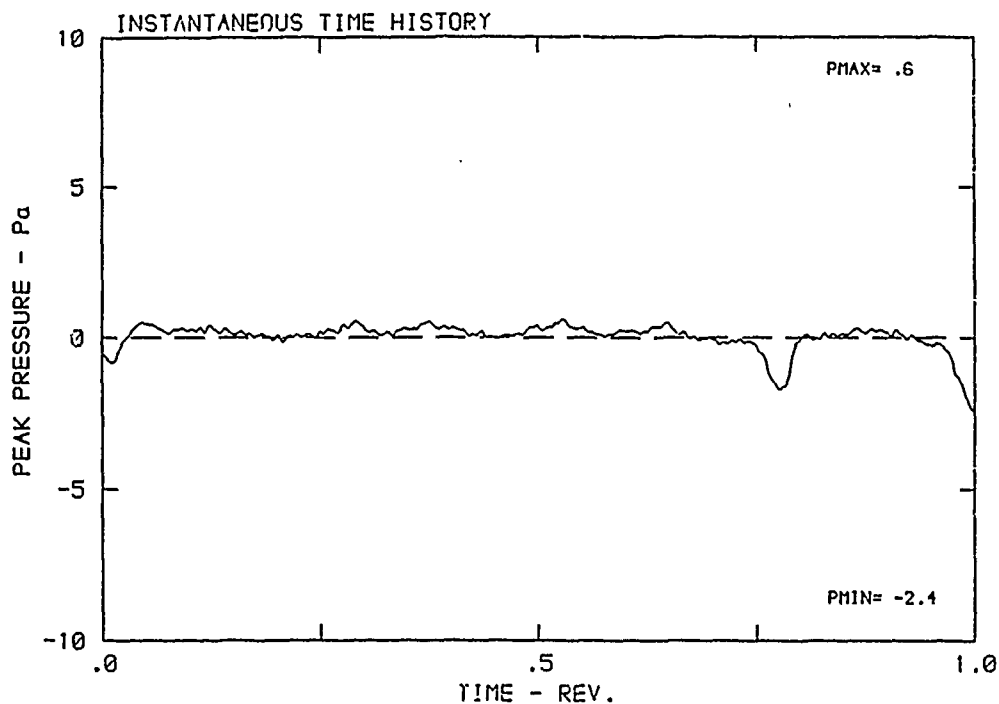
DATA POINT: AN-7    RUN: 68    MP: 5

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K



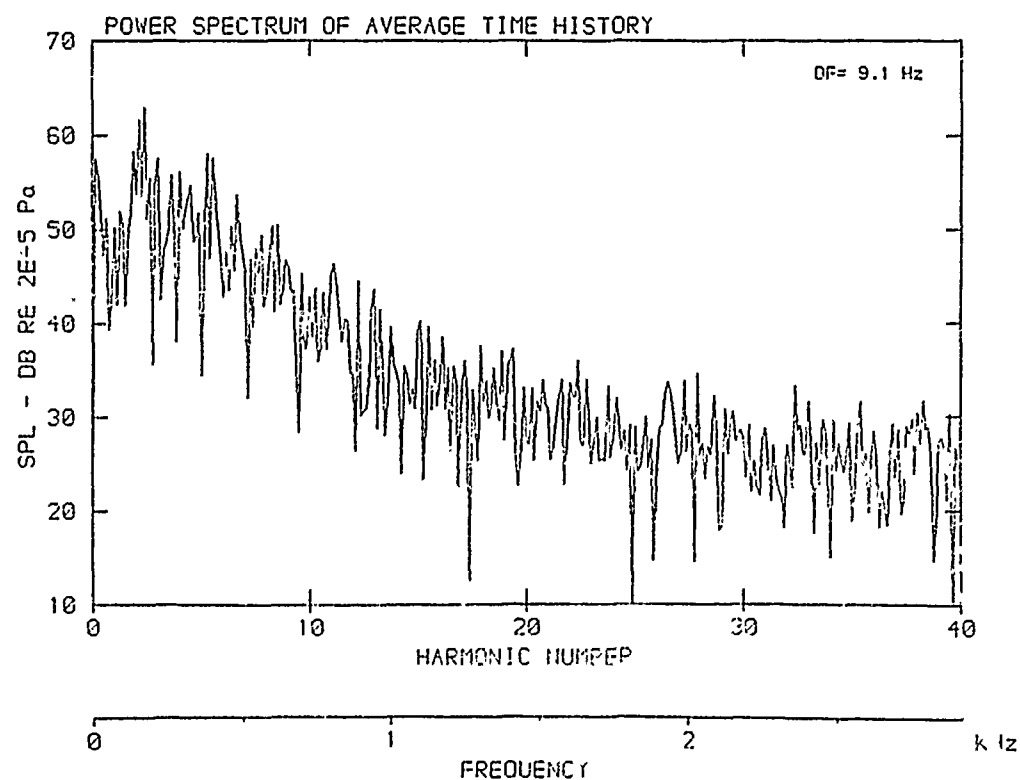
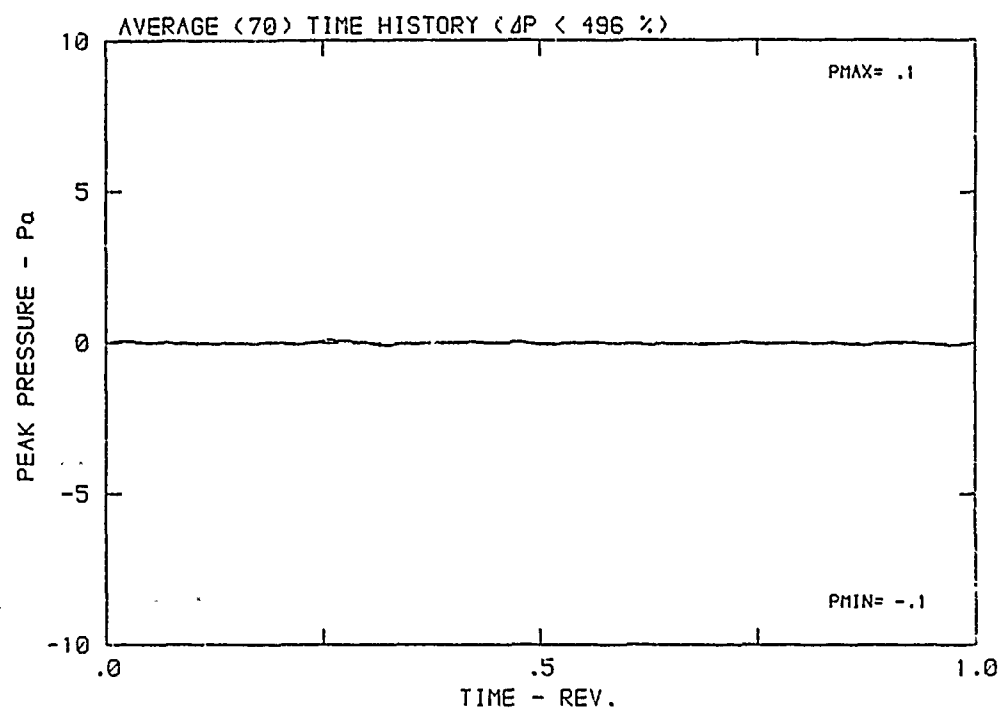
DATA POINT: AN-7 RUN: 68 MP: 6

$\beta$ : 20.8° MH: .7174 n: 2189 rpm  $v/u$ : .331  $\phi$ : .0° T: 291.0 K



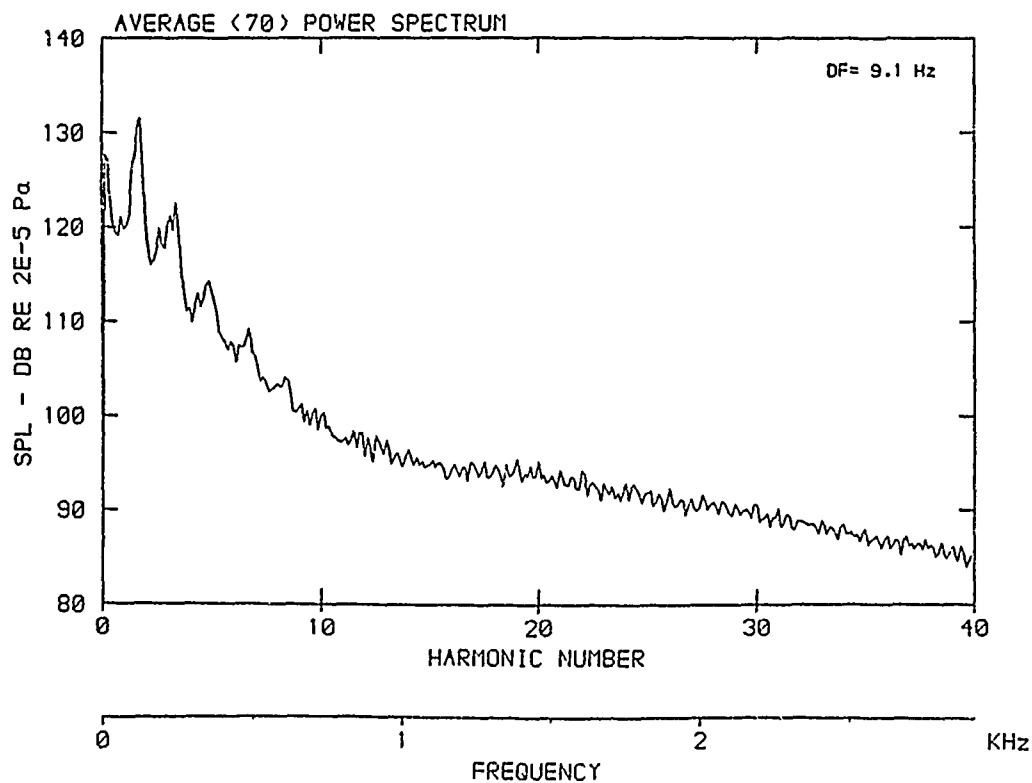
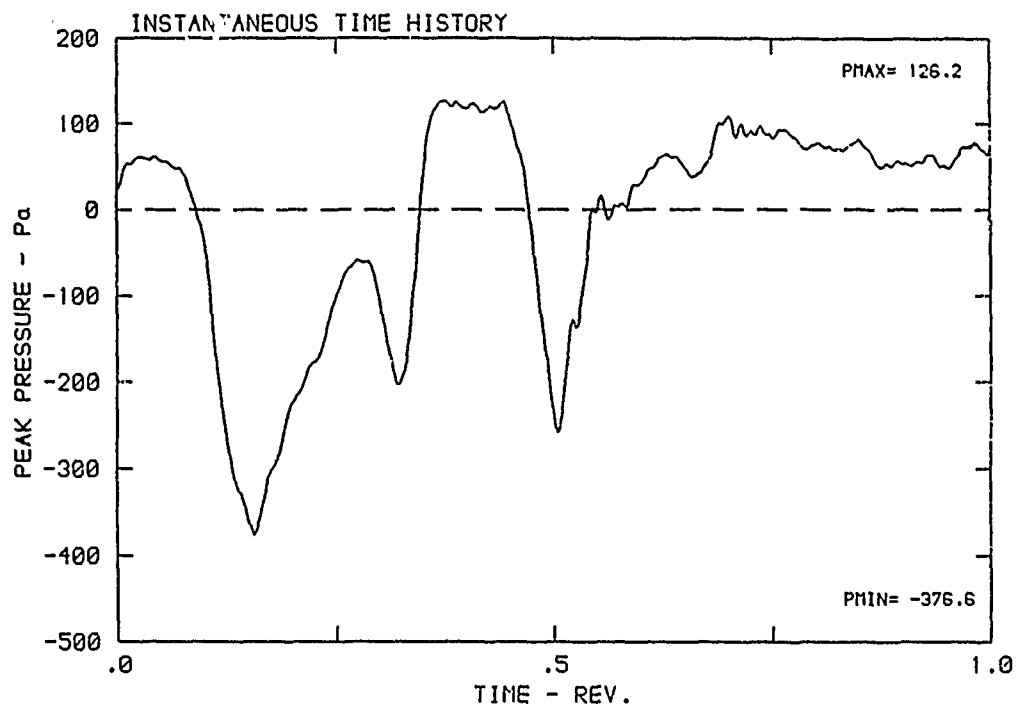
DATA POINT: AN-7      RUN: 68      MP: 6

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm     $v/u$ : .331     $\phi$ : .0°    T: 291.0 K



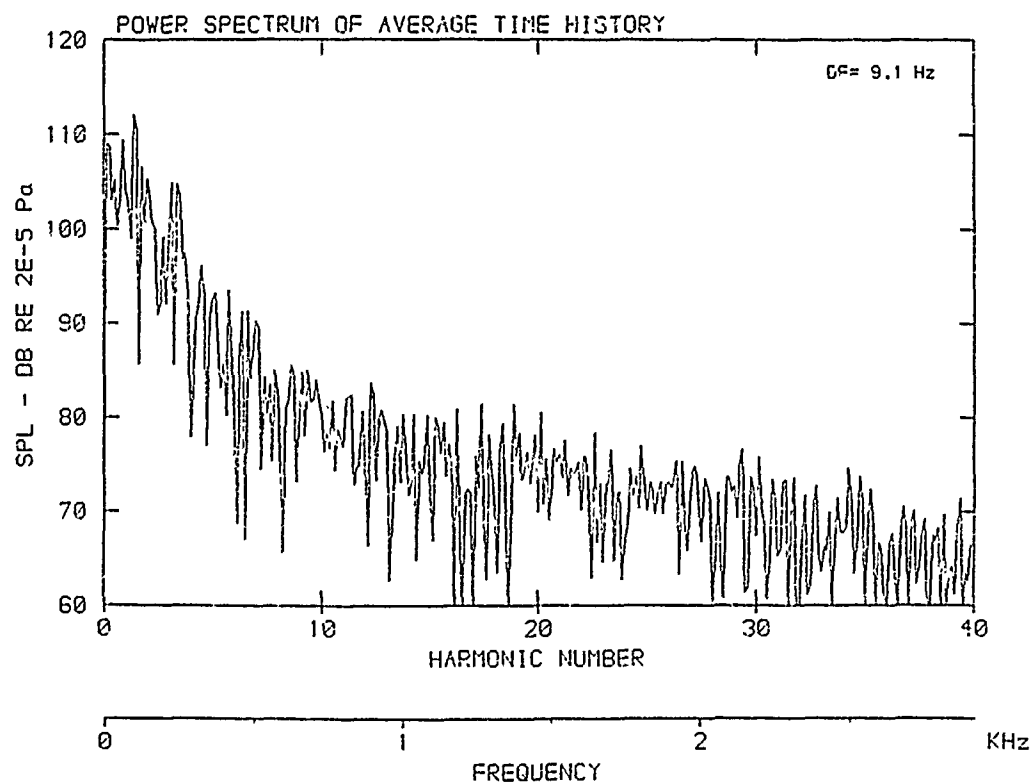
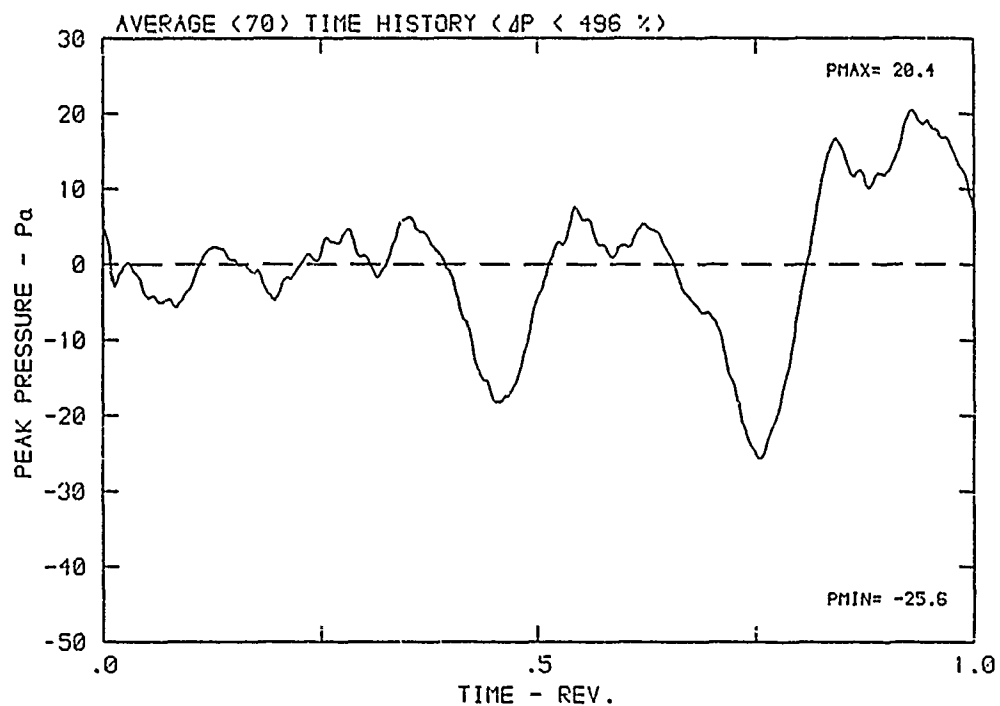
DATA POINT: AN-7 RUN: 68 MP: 7

$\beta$ :  $20.8^\circ$  MH: .7174 n: 2189 rpm v/u: .331  $\phi$ :  $.0^\circ$  T: 291.0 K



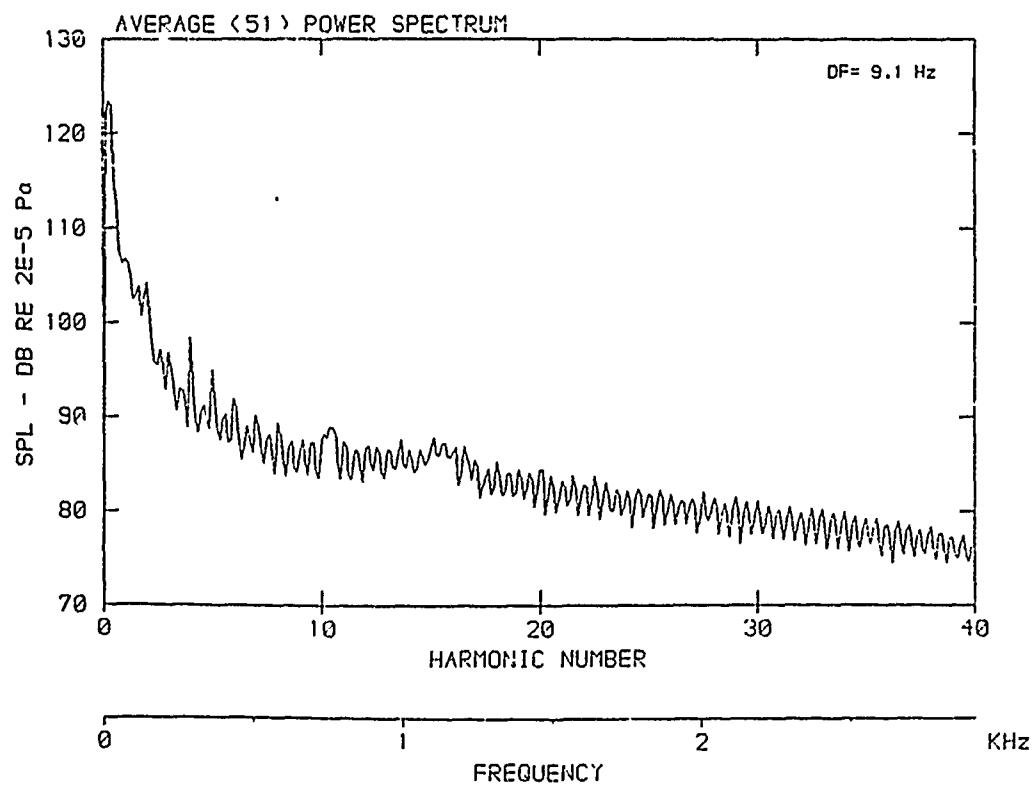
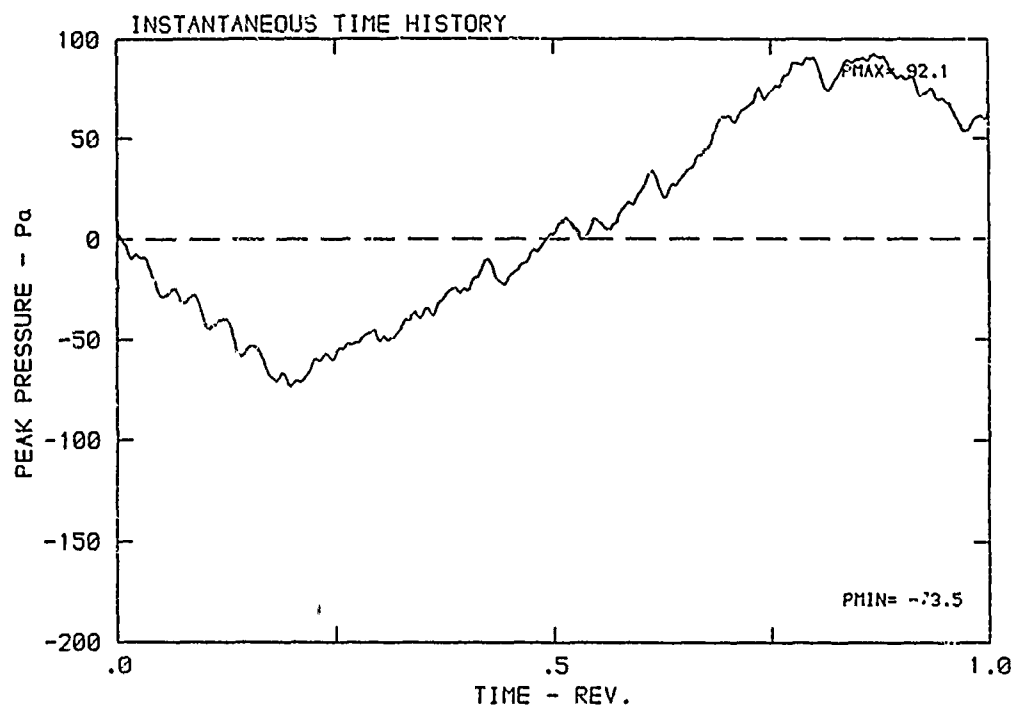
DATA POINT: AN-7    RUN: 68    MP: 7

$\beta$ : 20.8°    MH: .7174    n: 2189 rpm    v/u: .331     $\phi$ : .0°    T: 291.0 K



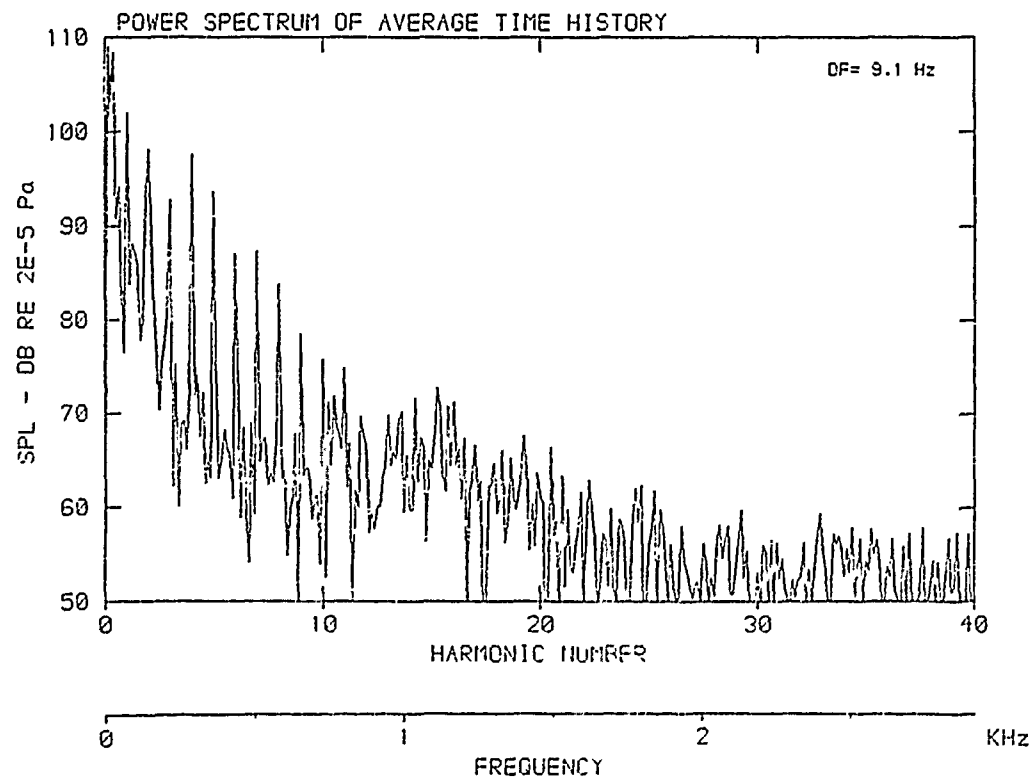
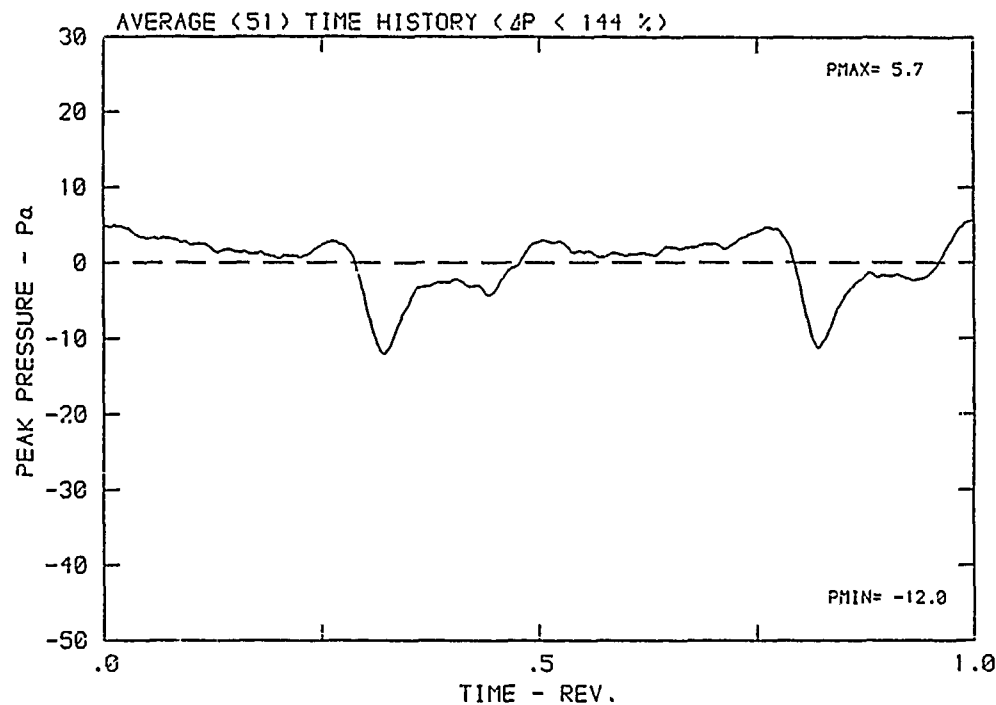
DATA POINT: AN-7 RUN: 68 MP: 9

$\beta$ : 20.8° MH: .7174 n: 2189 rpm v/u: .331  $\phi$ : .0° T: 291.0 K



DATA POINT: AN-7 RUN: 68 MP: 9

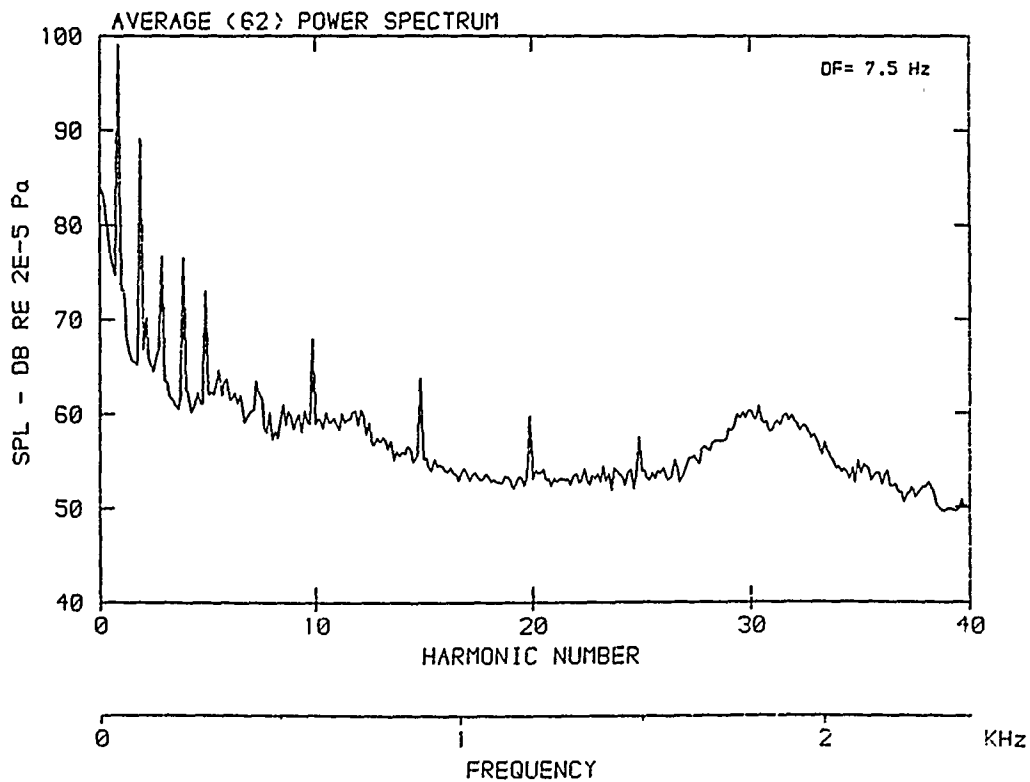
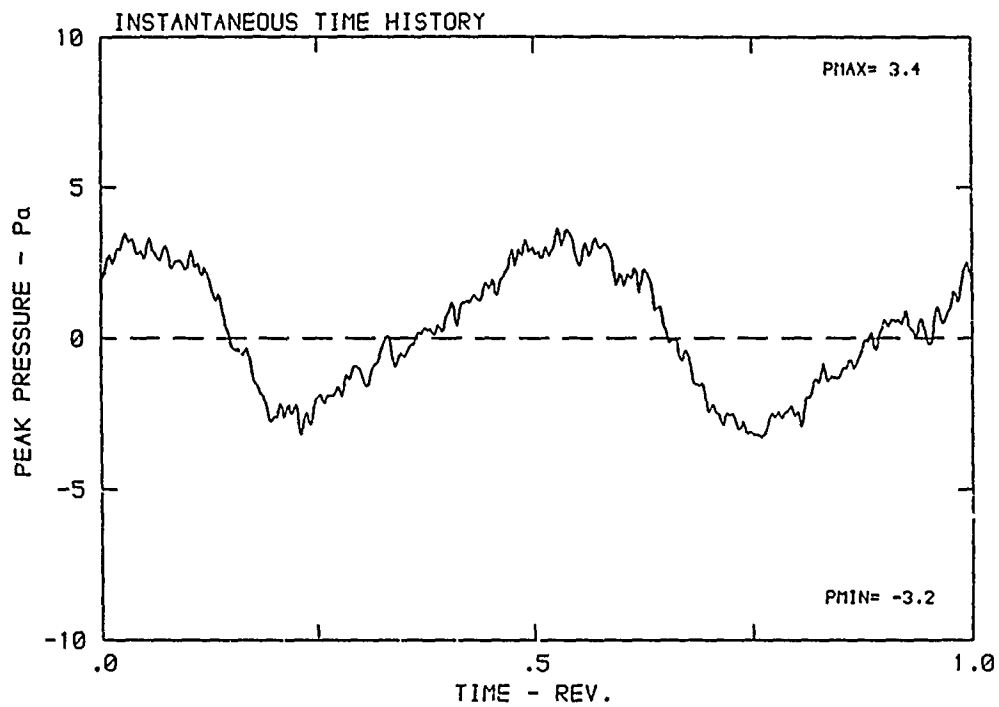
$\beta$ : 20.8° MH: .7174 n: 2189 rpm v/u: .331  $\phi$ : .0° T: 291.0 K





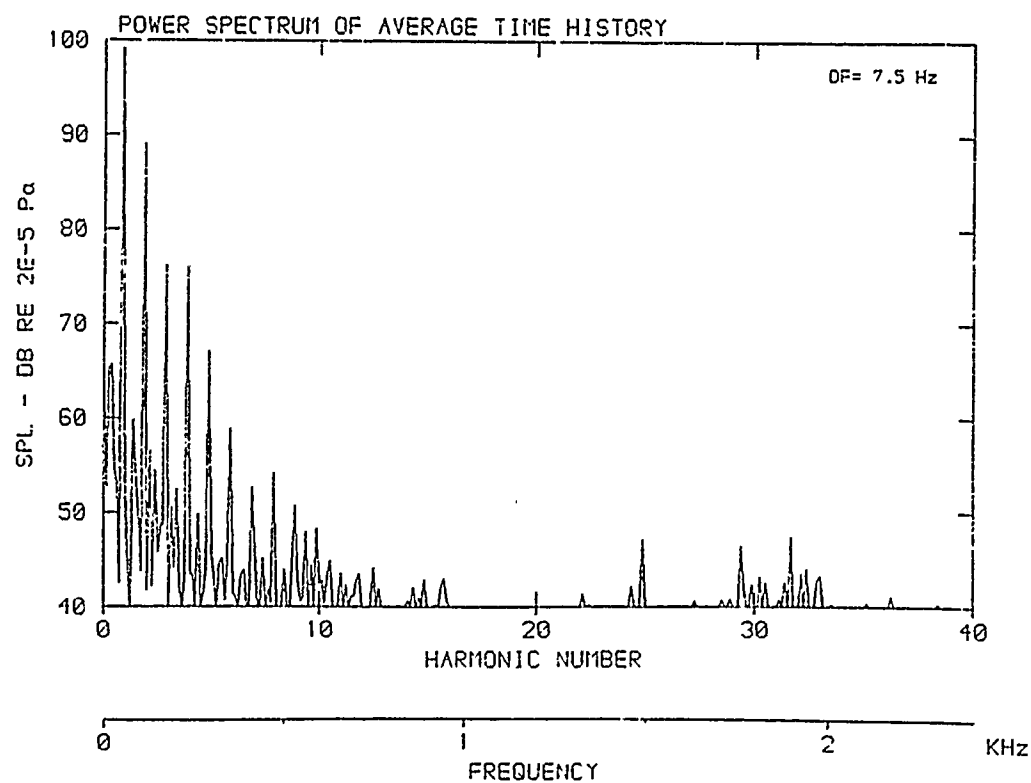
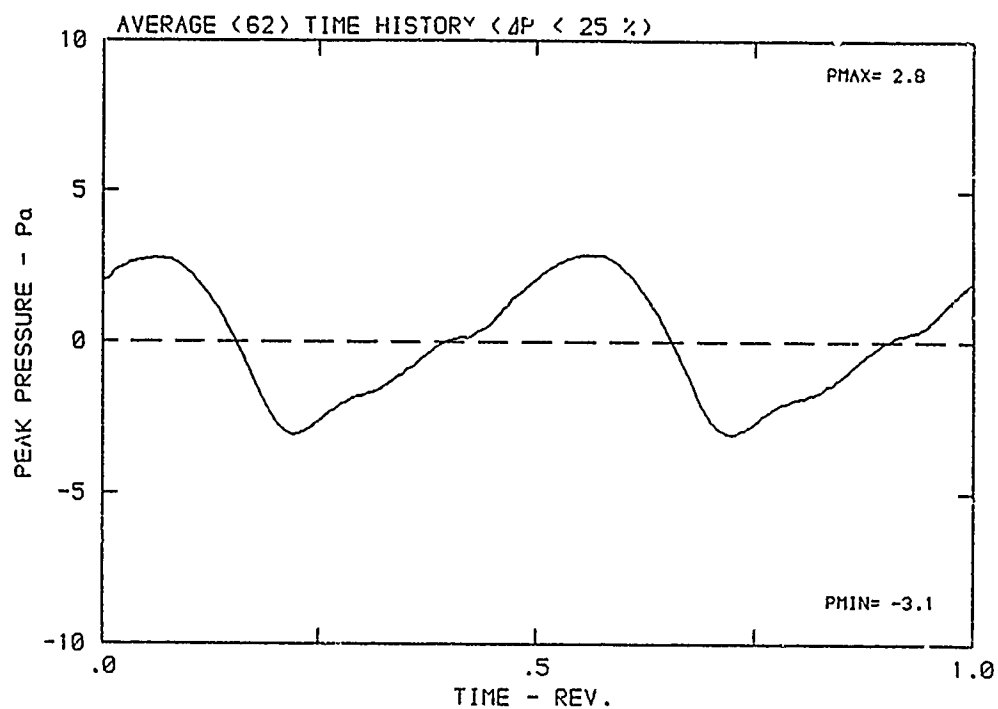
DATA POINT: BN-1      RUN: 58      MP: 1

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



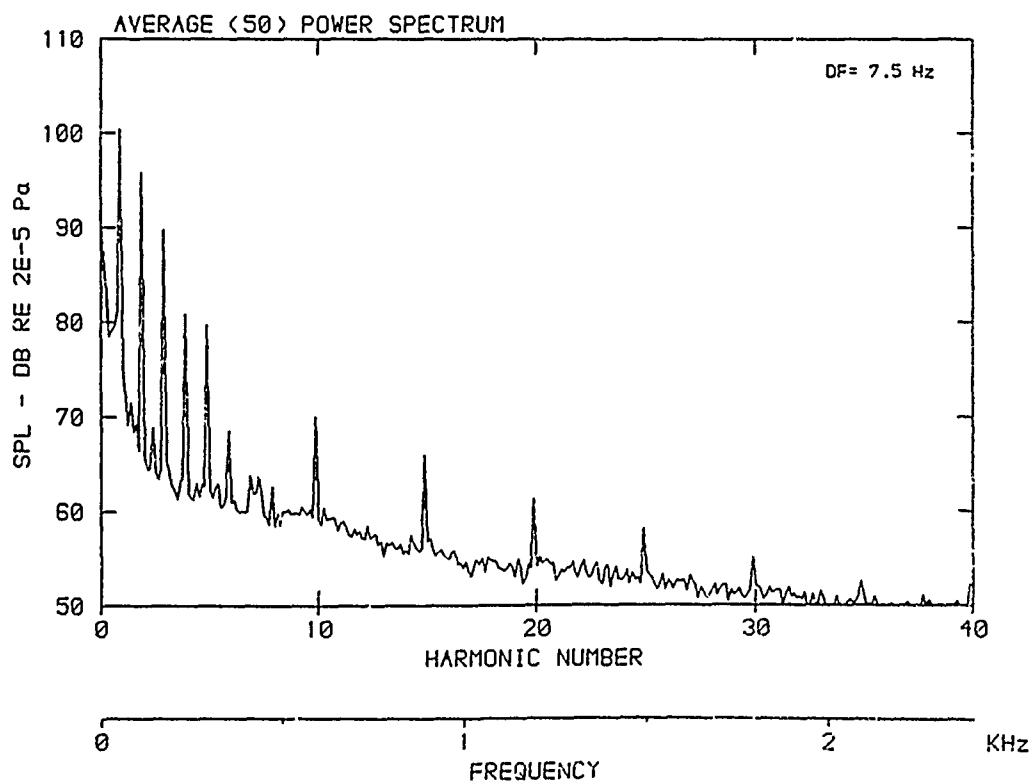
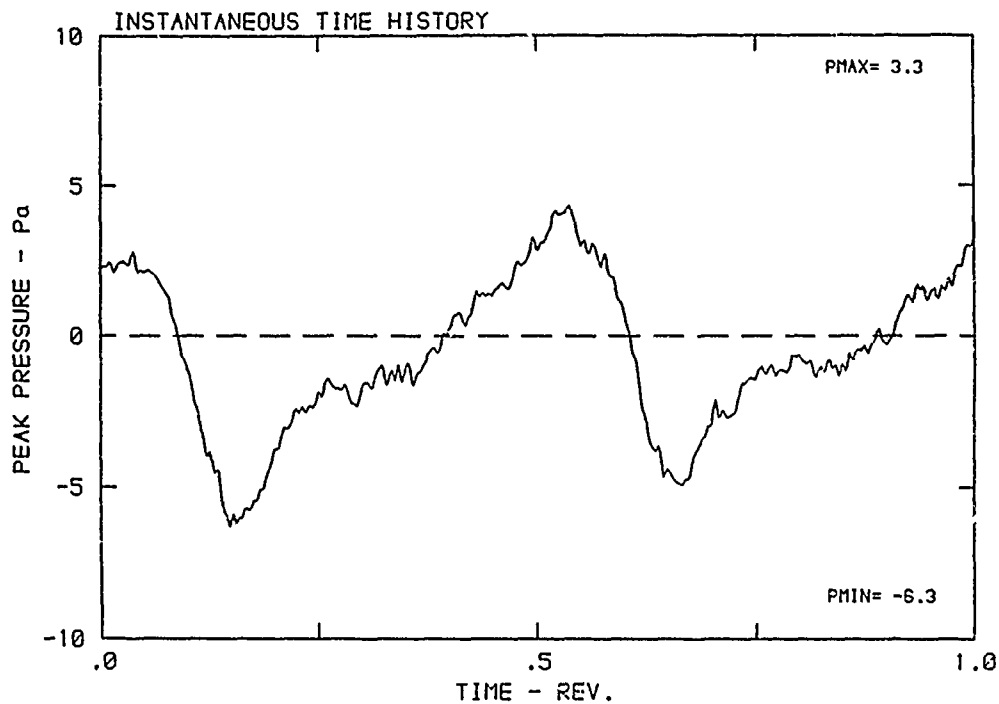
DATA POINT: BN-1      RUN: 58      MP: 1

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



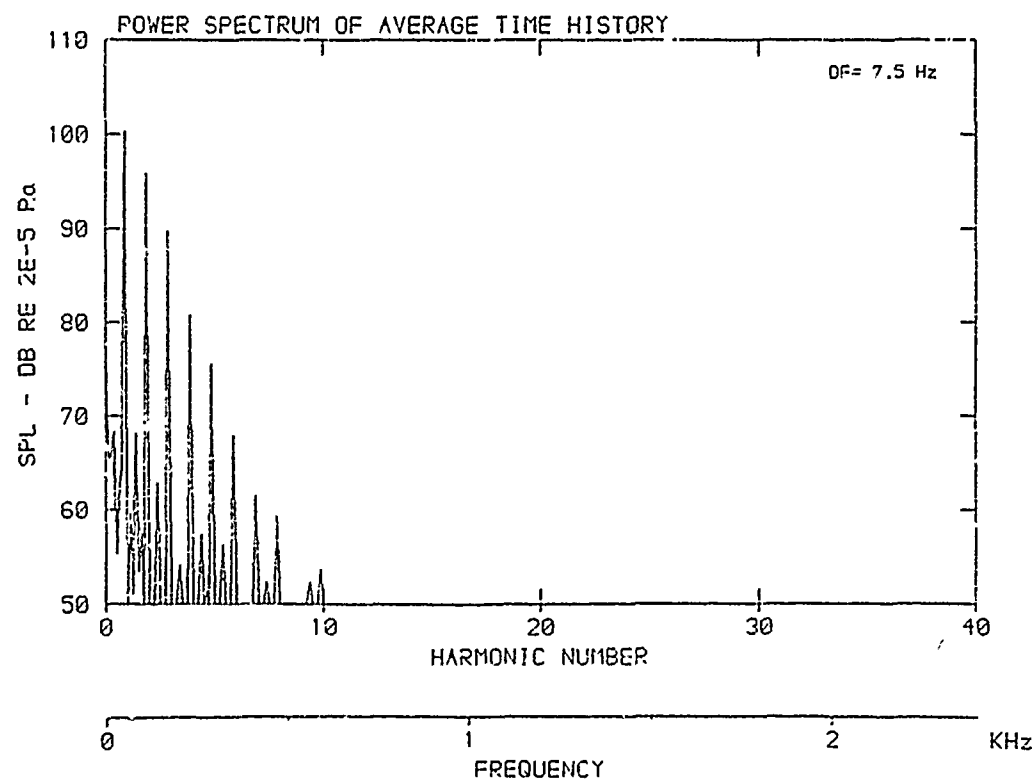
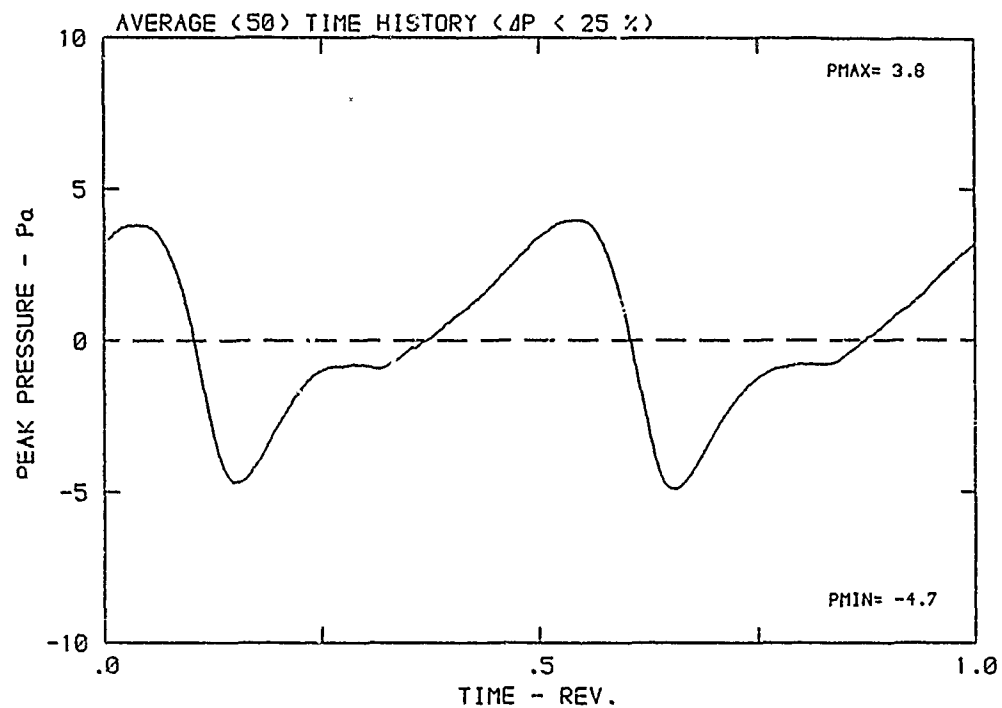
DATA POINT: BN-1    RUN: 58    MP: 2

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



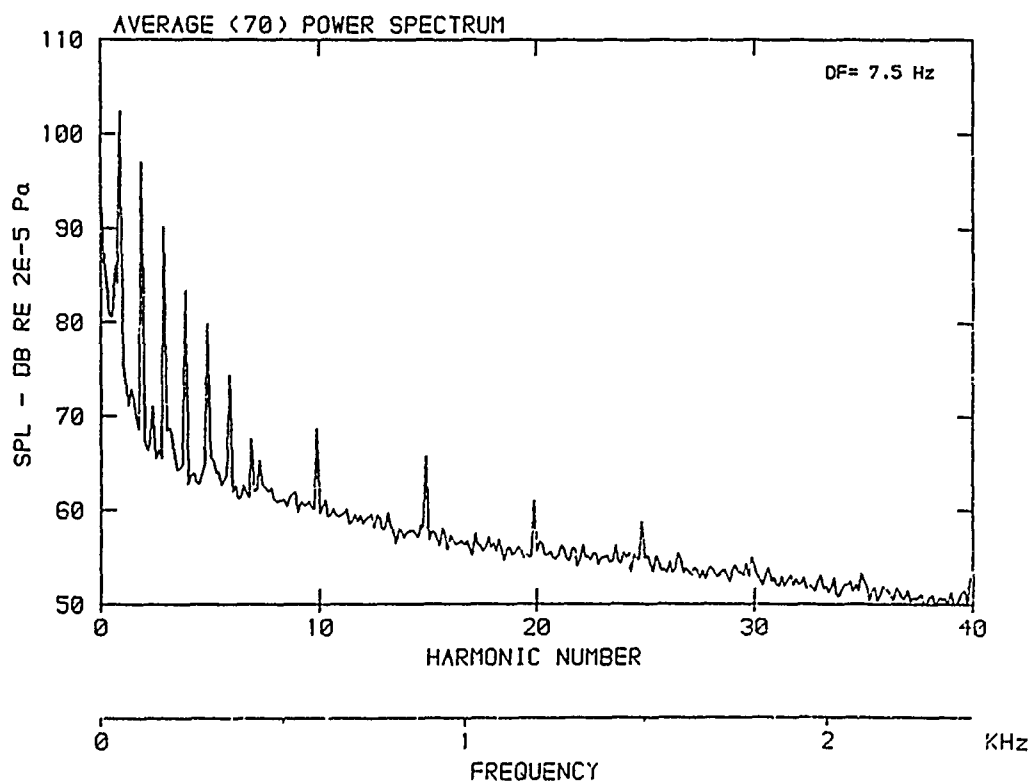
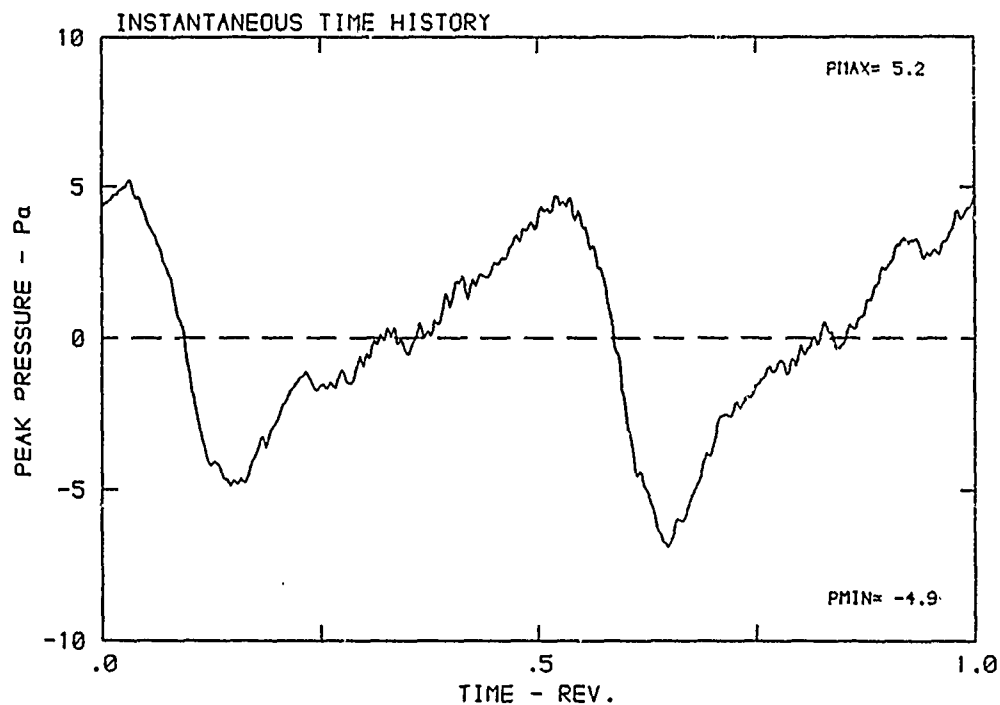
DATA POINT: BN-1      RUN: 58      MP: 2

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm     $v/u$ : .179     $\phi$ : .0°    T: 287.1 K



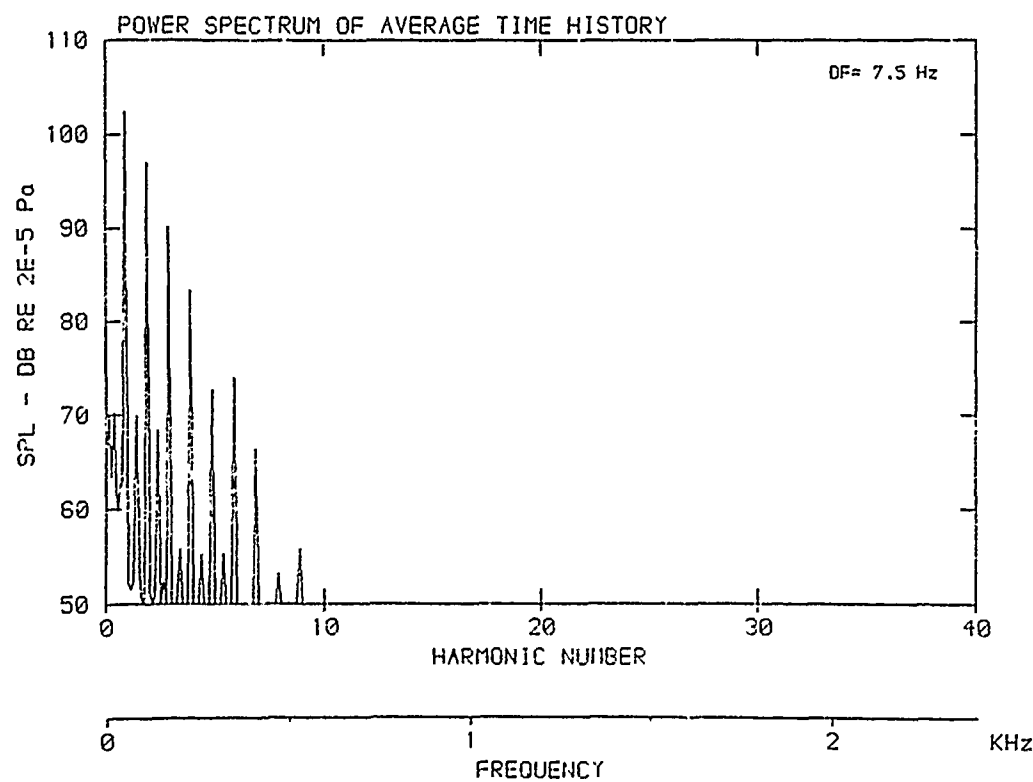
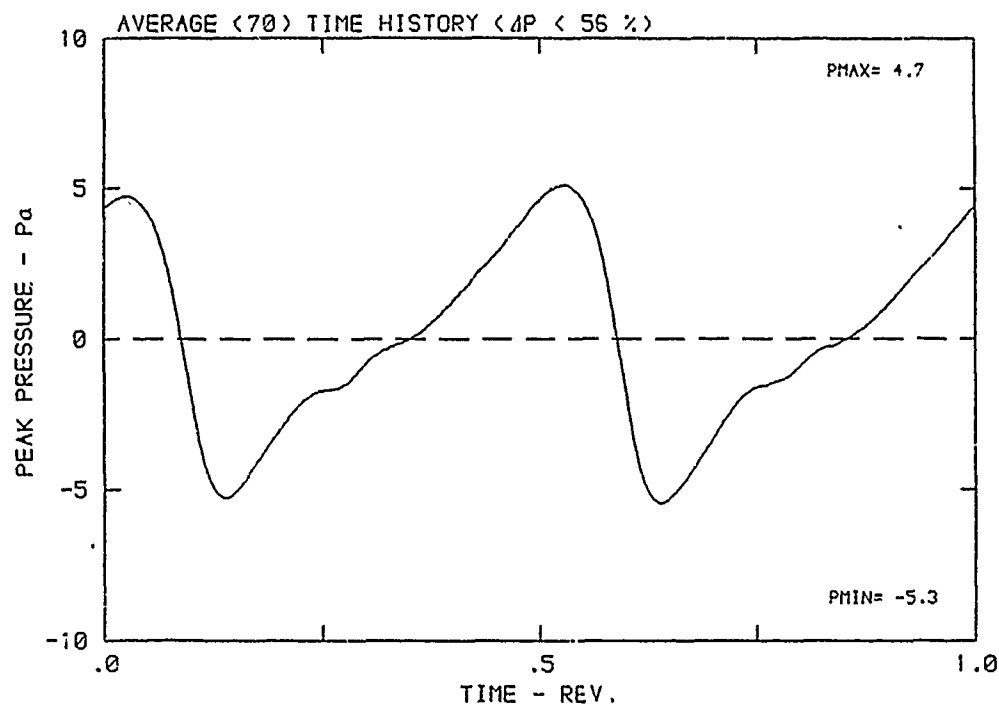
DATA POINT: BN-1 RUN: 58 MP: 3

$\beta$ : 19.9° MH: .5727 n: 1800 rpm  $v/u$ : .179  $\phi$ : .0° T: 287.1 K



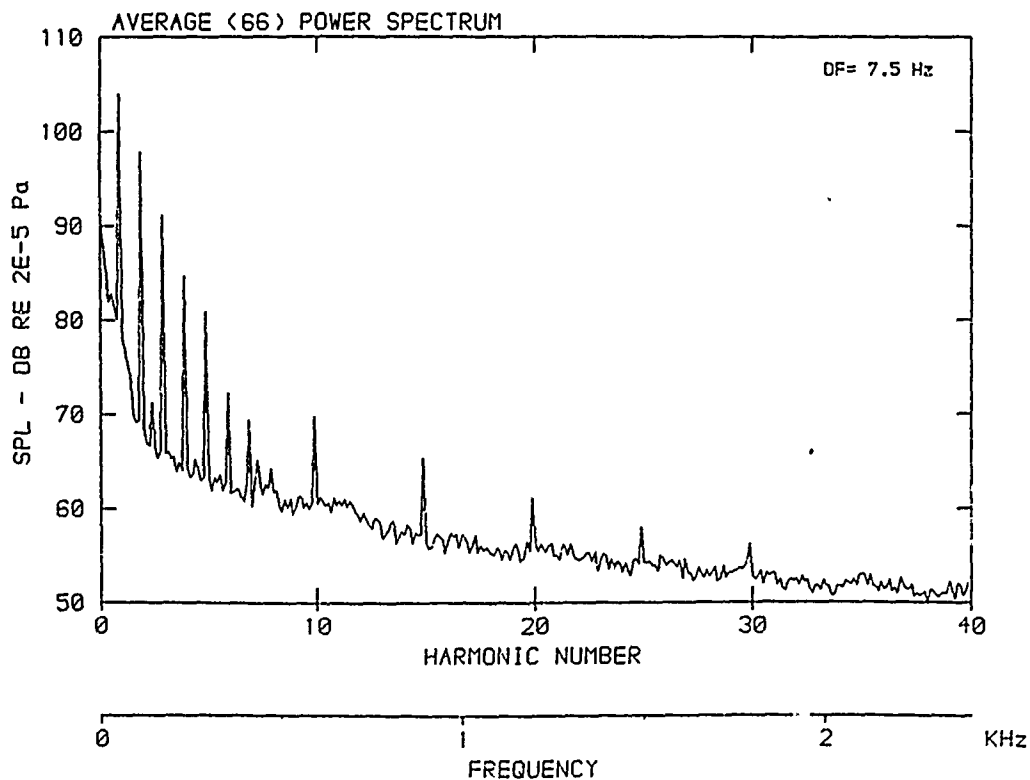
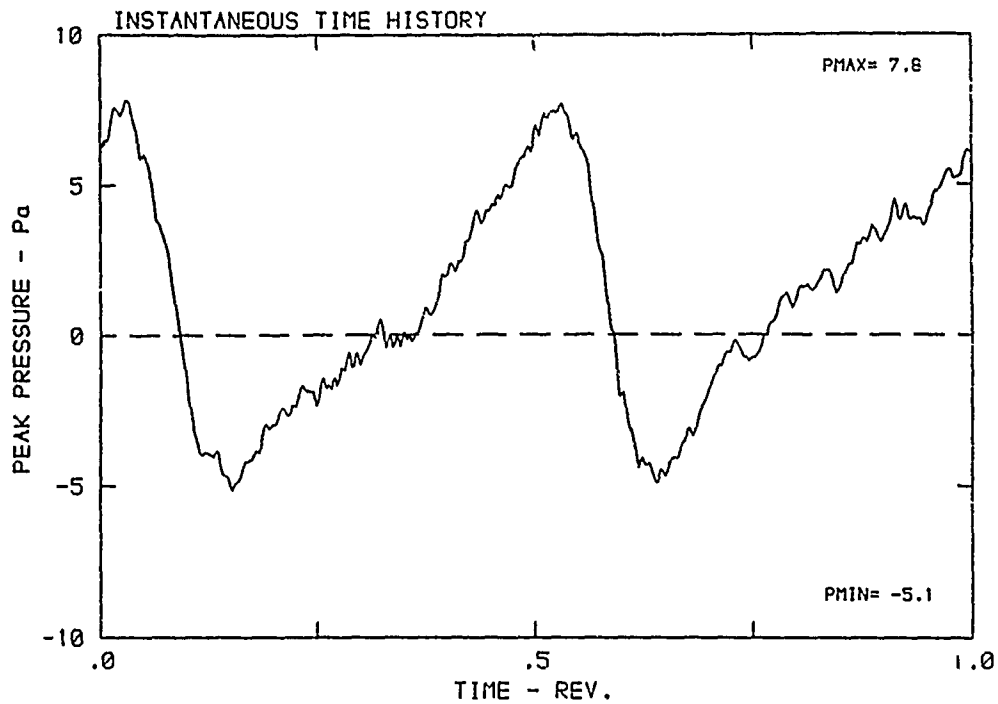
DATA POINT: BN-1      RUN: 58      MP: 3

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



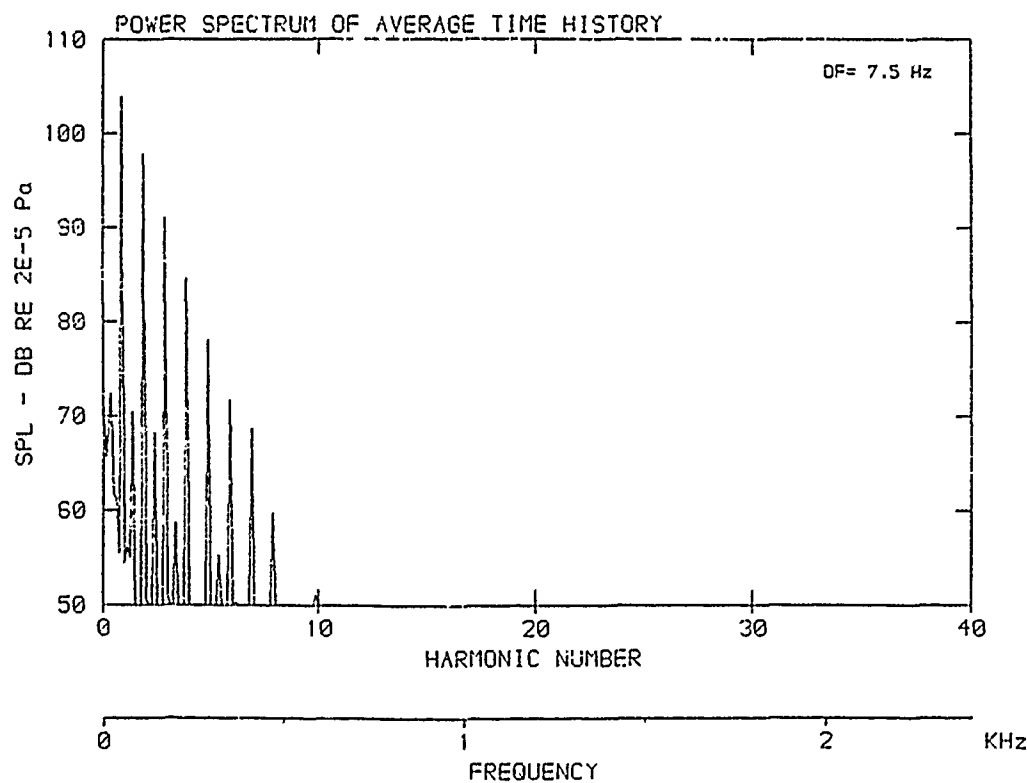
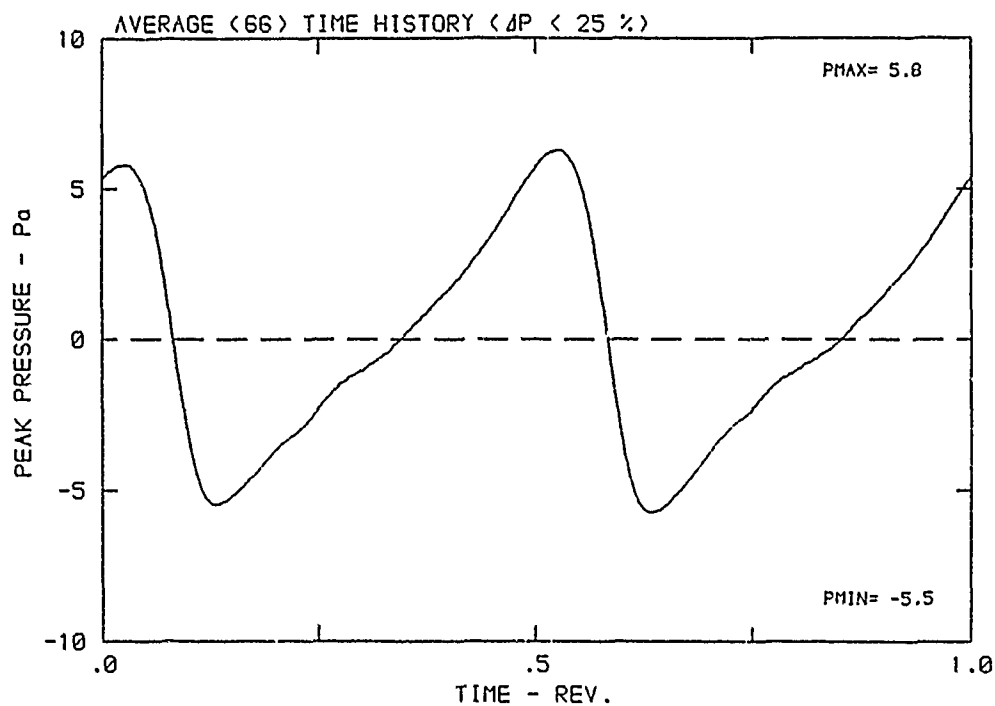
DATA POINT: BN-1      RUN: 58      MP: 4

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



DATA POINT: BN-1      RUN: 58      MP: 4

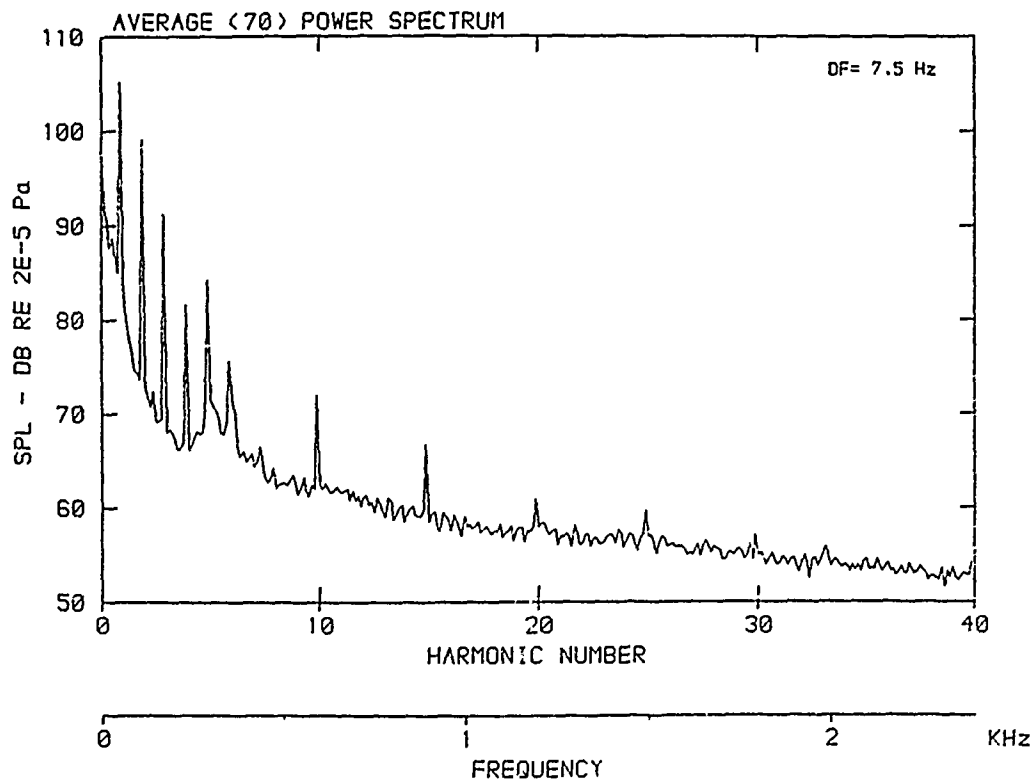
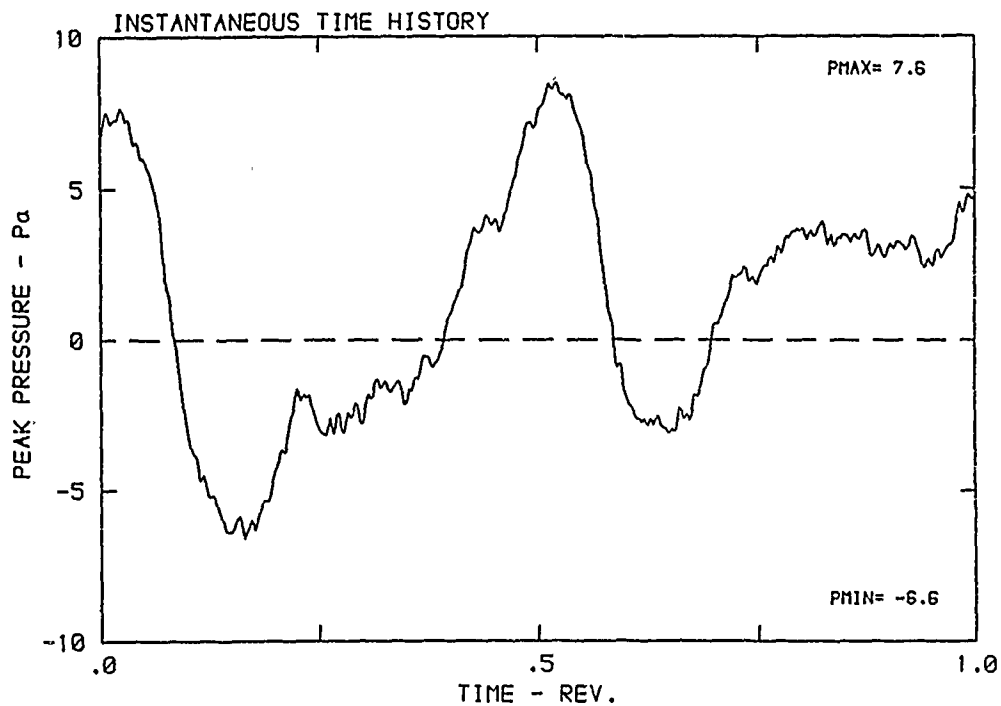
$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K





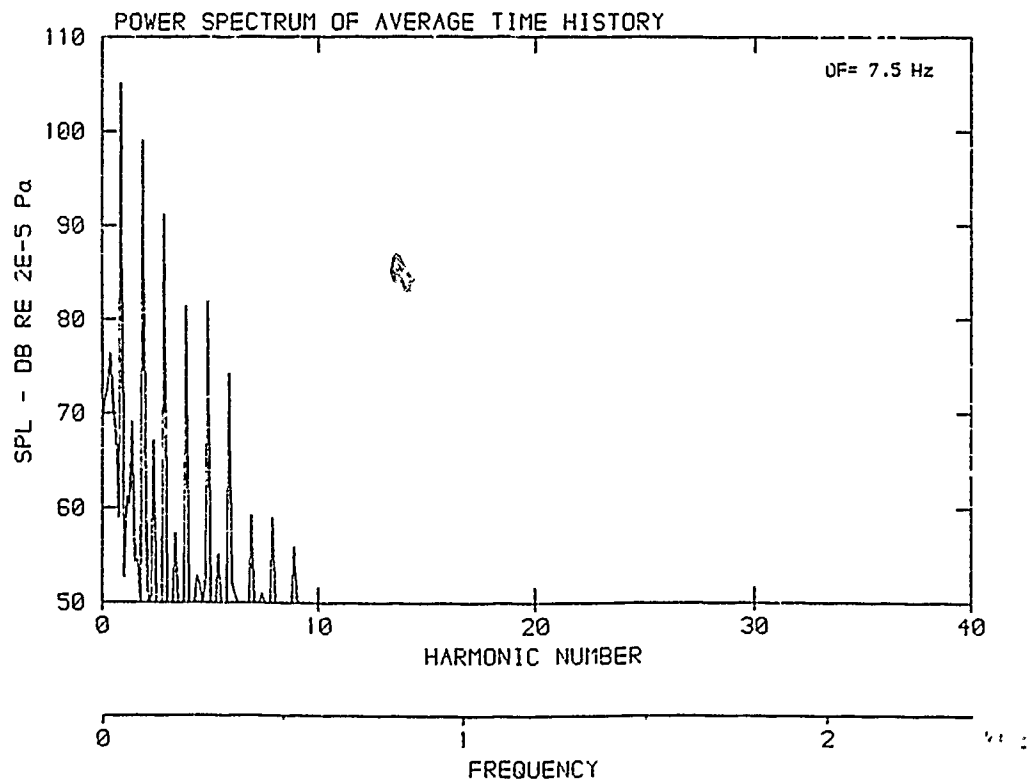
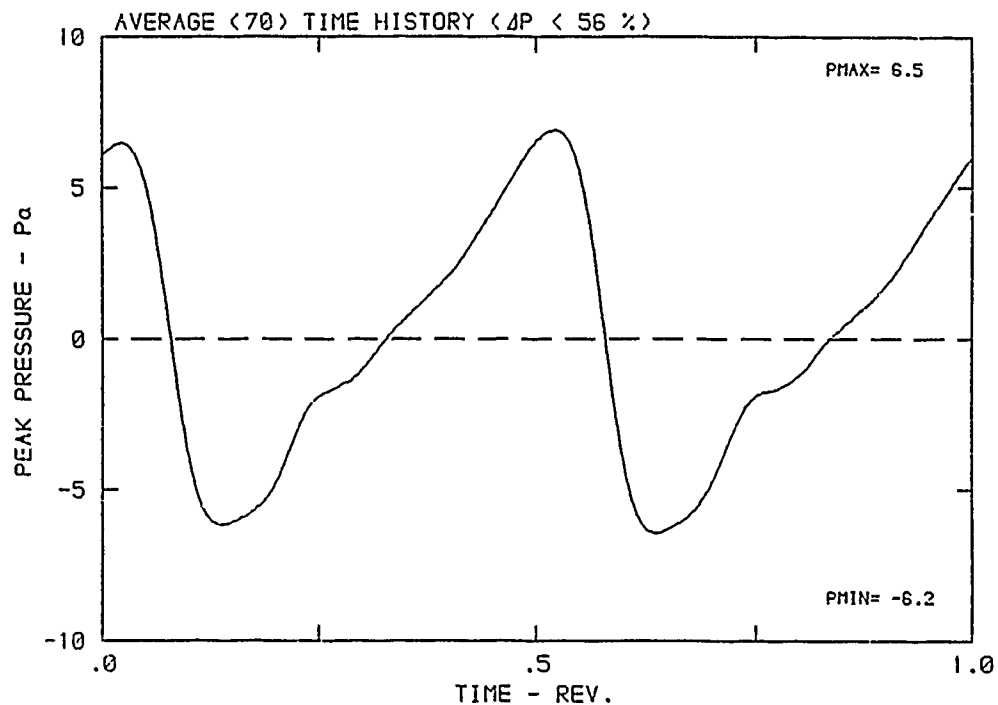
DATA POINT: BN-1    RUN: 58    MP: 5

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



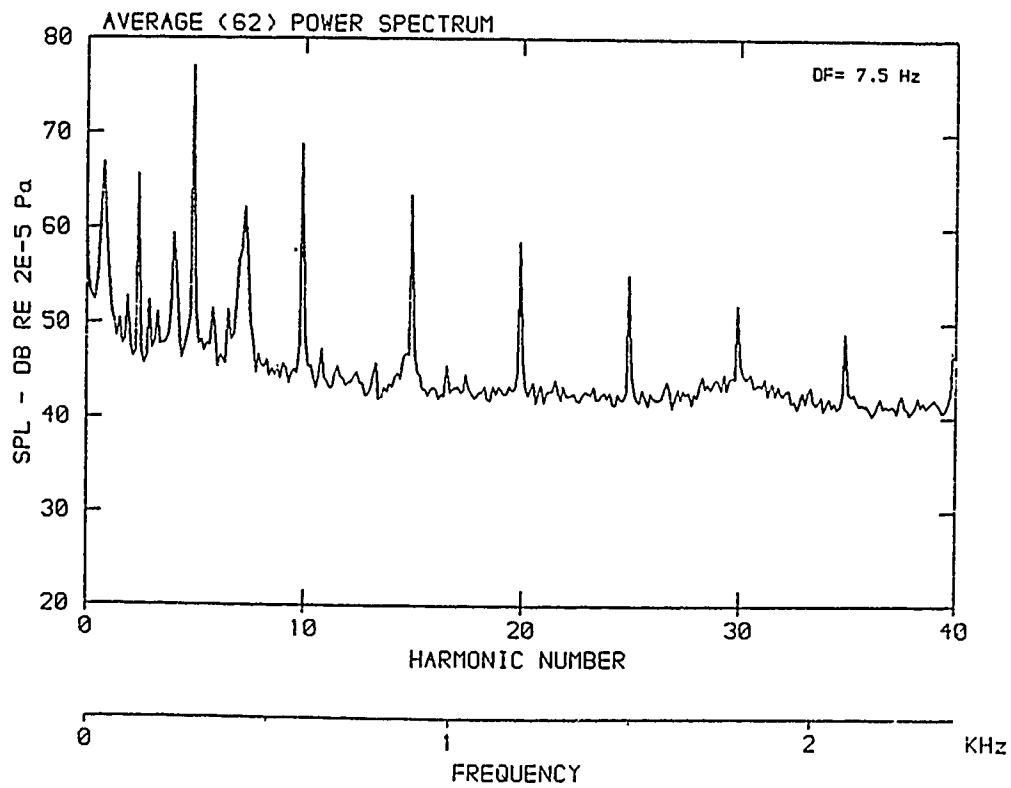
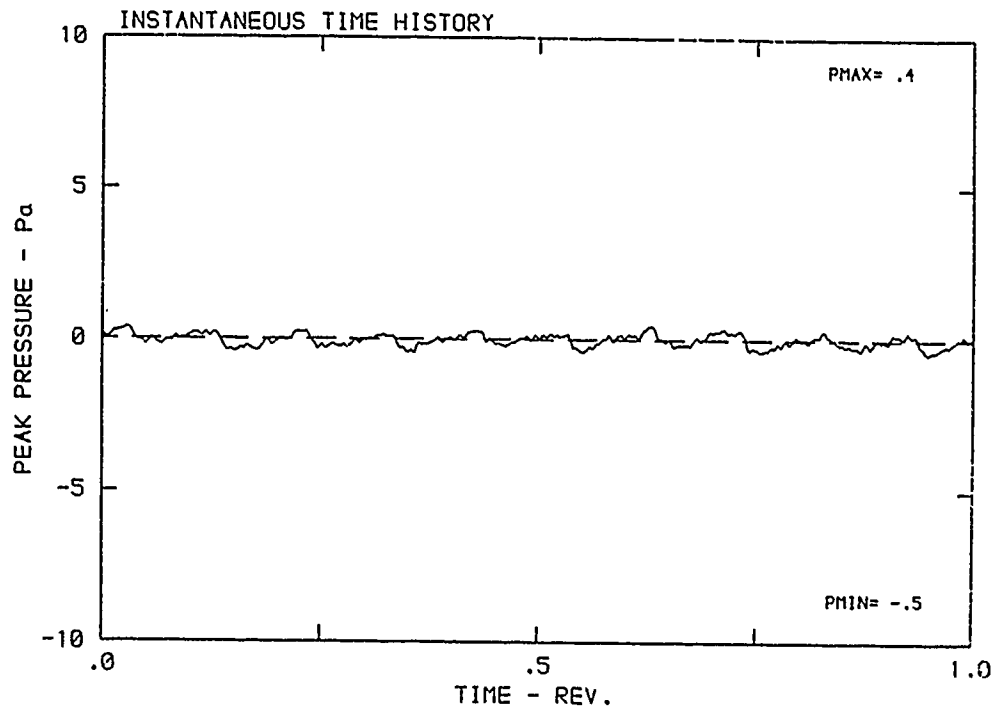
DATA POINT: BN-1      RUN: 58      MP: 5

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



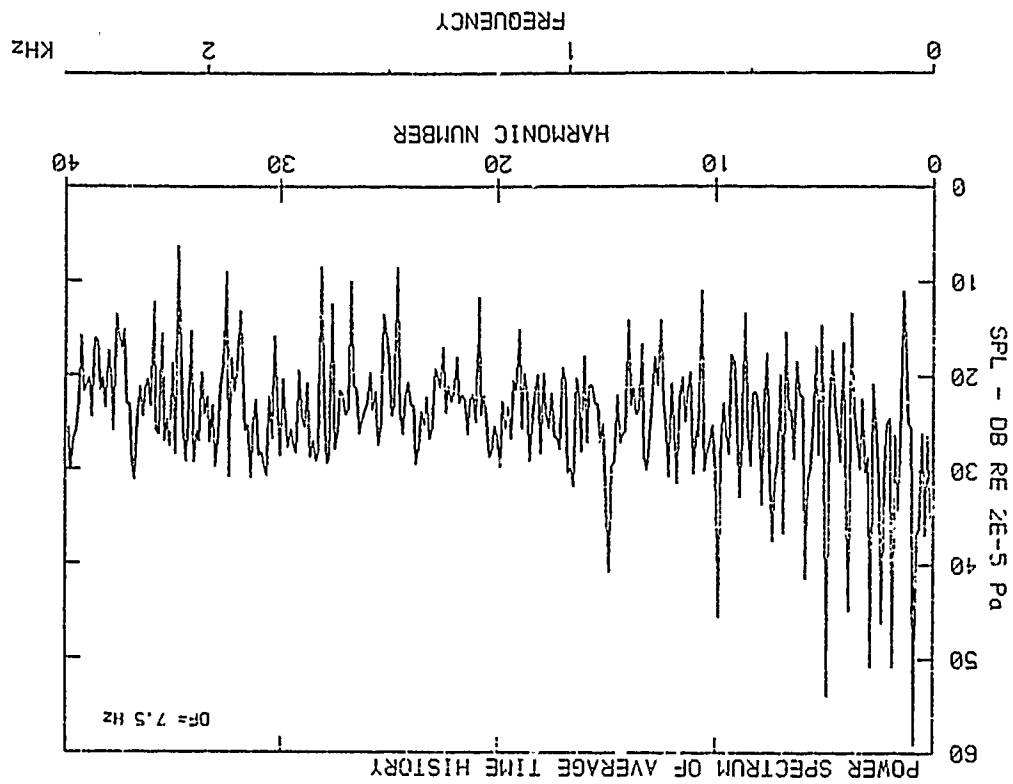
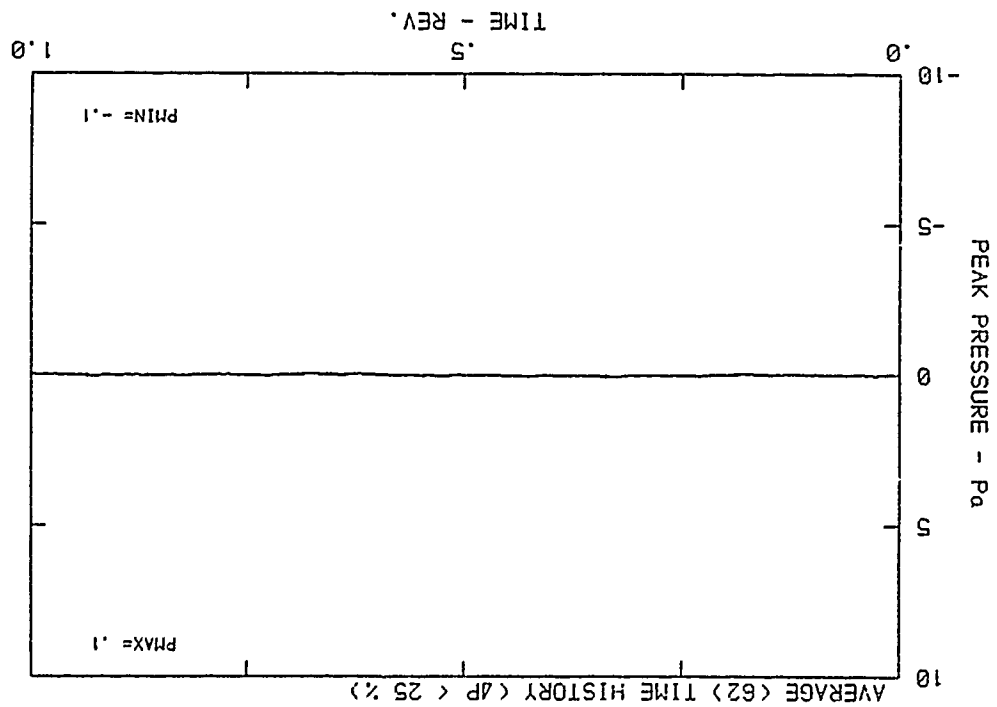
DATA POINT: BN-1      RUN: 58      MP: 6

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



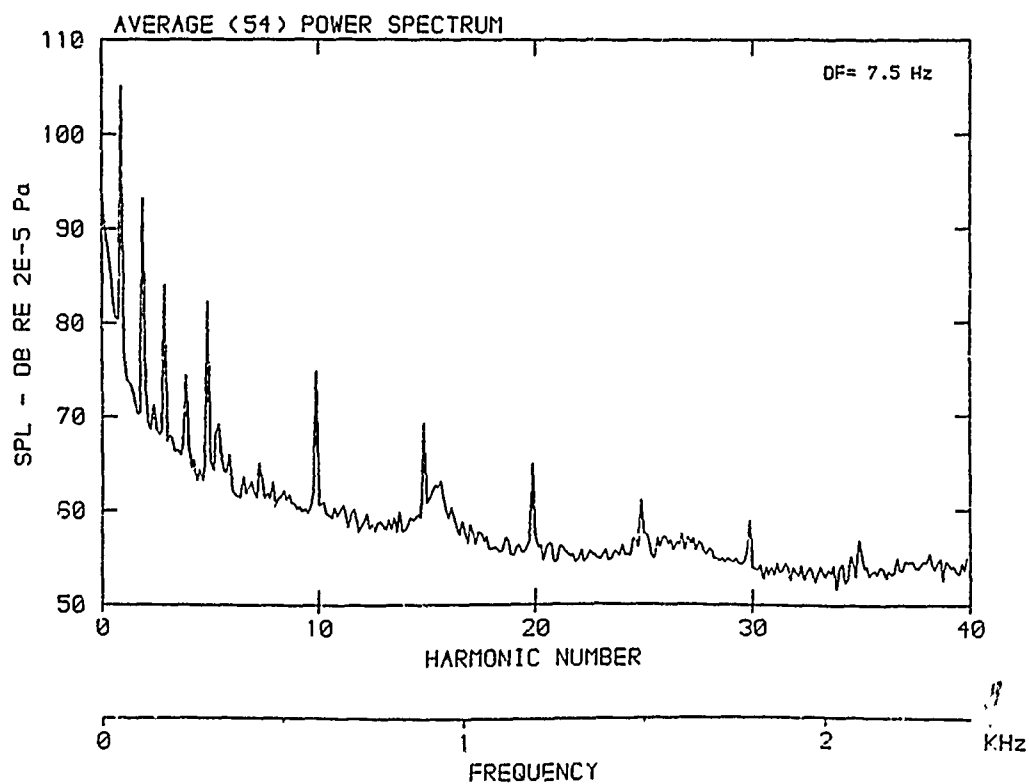
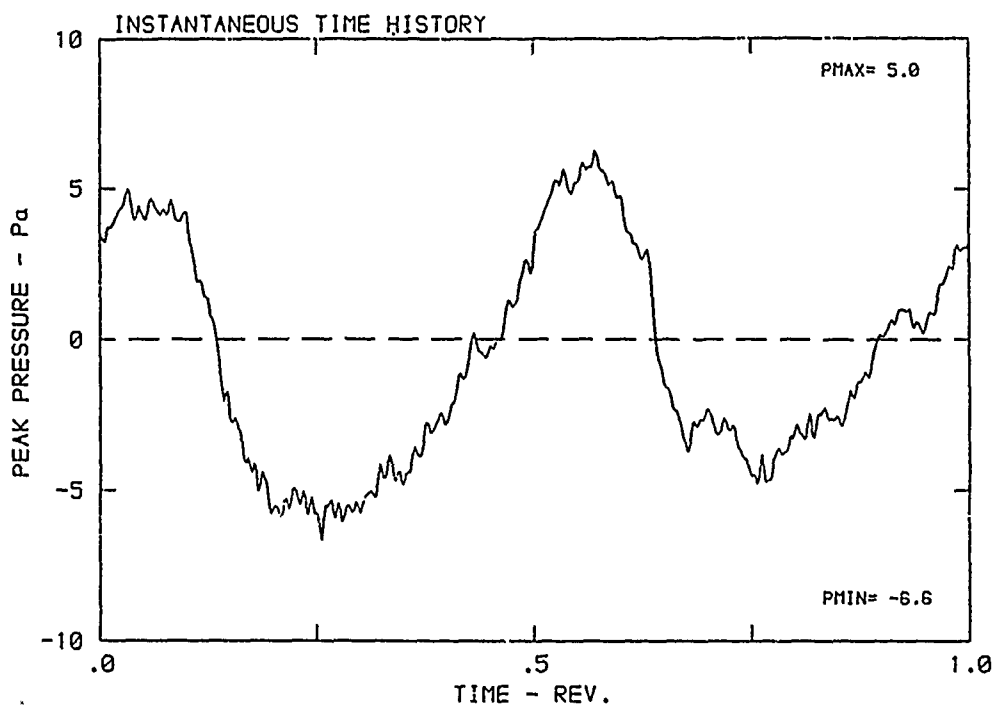
DATA POINT: BN-1      RUN: 58      MP: 6

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



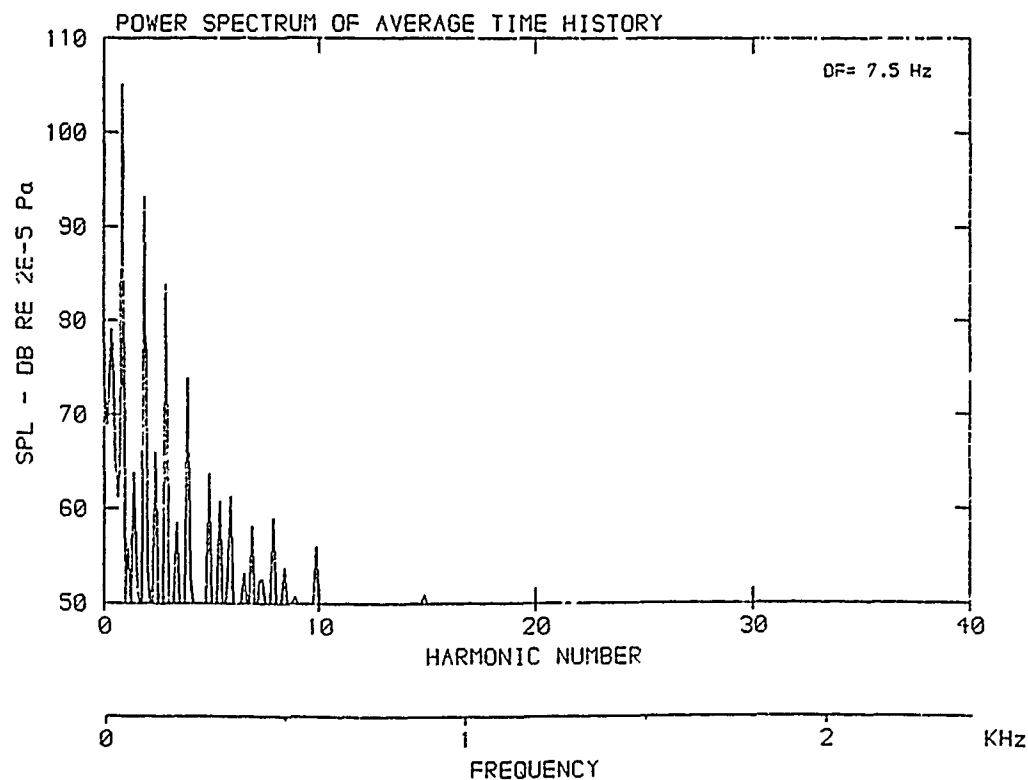
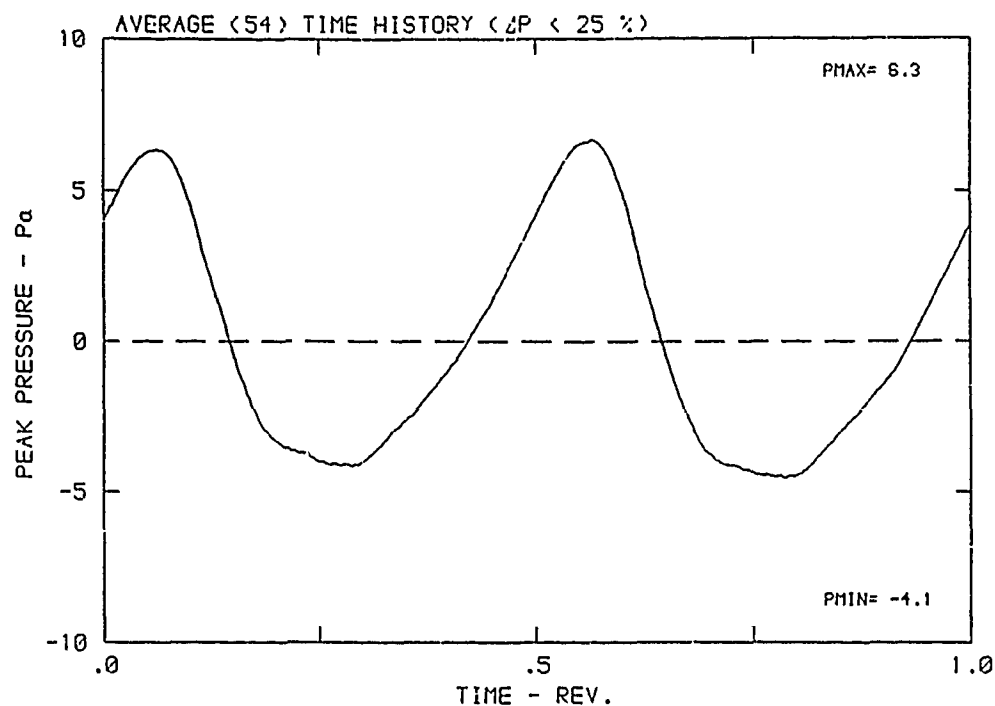
DATA POINT: BN-1      RUN: 58      MP: 7

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



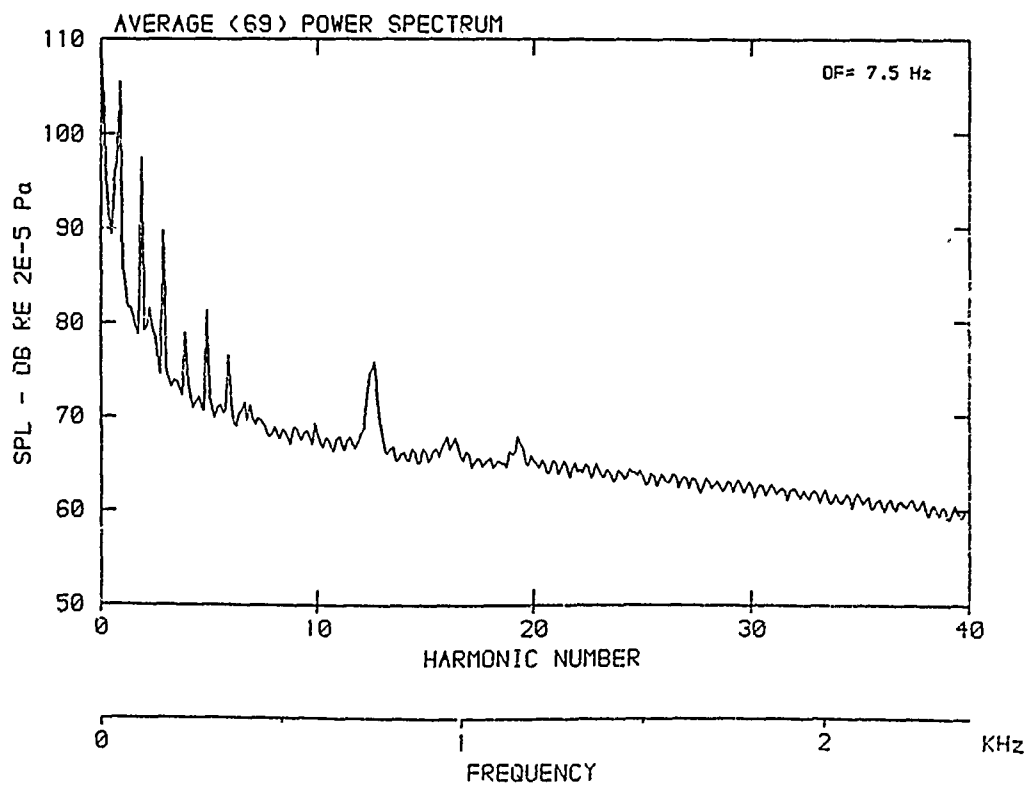
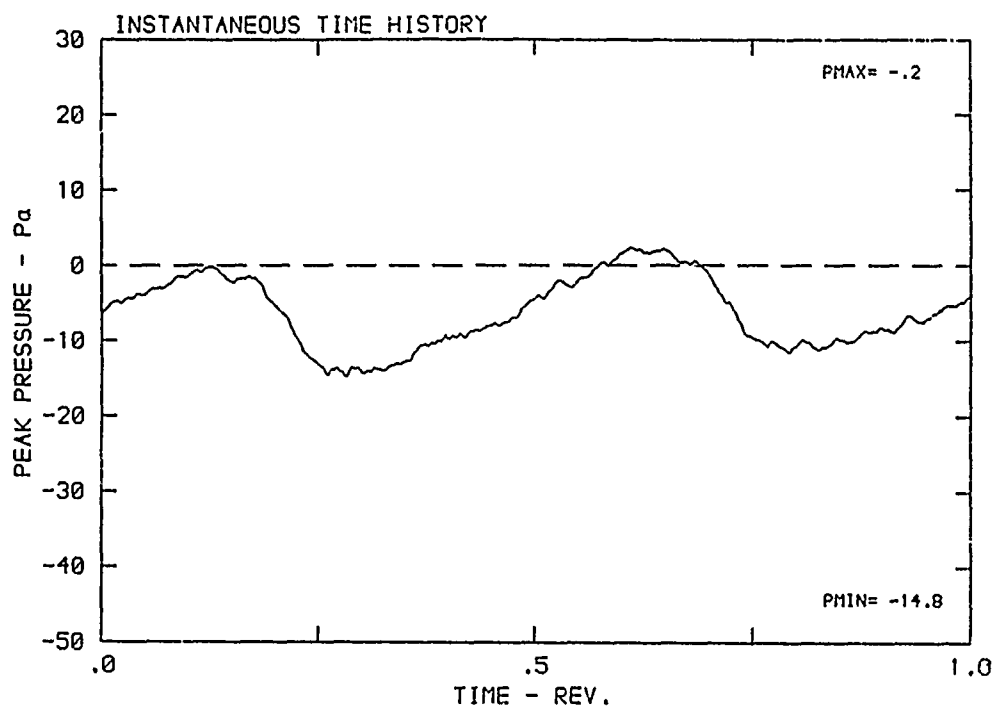
DATA POINT: BN-1      RUN: 58      MP: 7

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 287.1 K



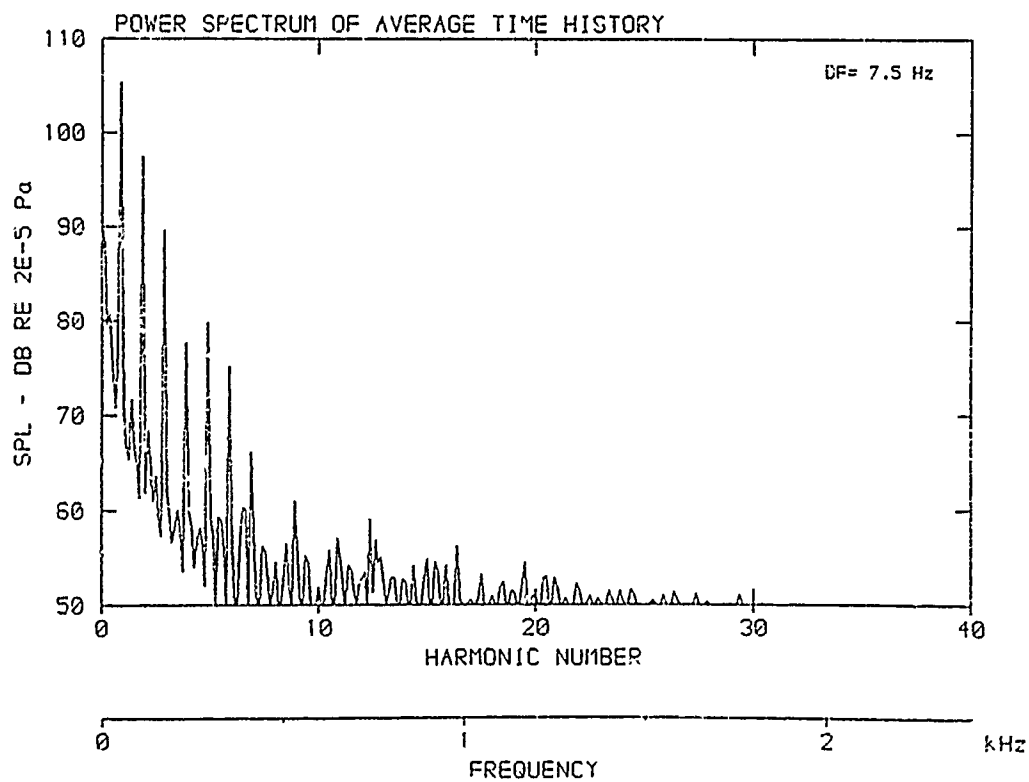
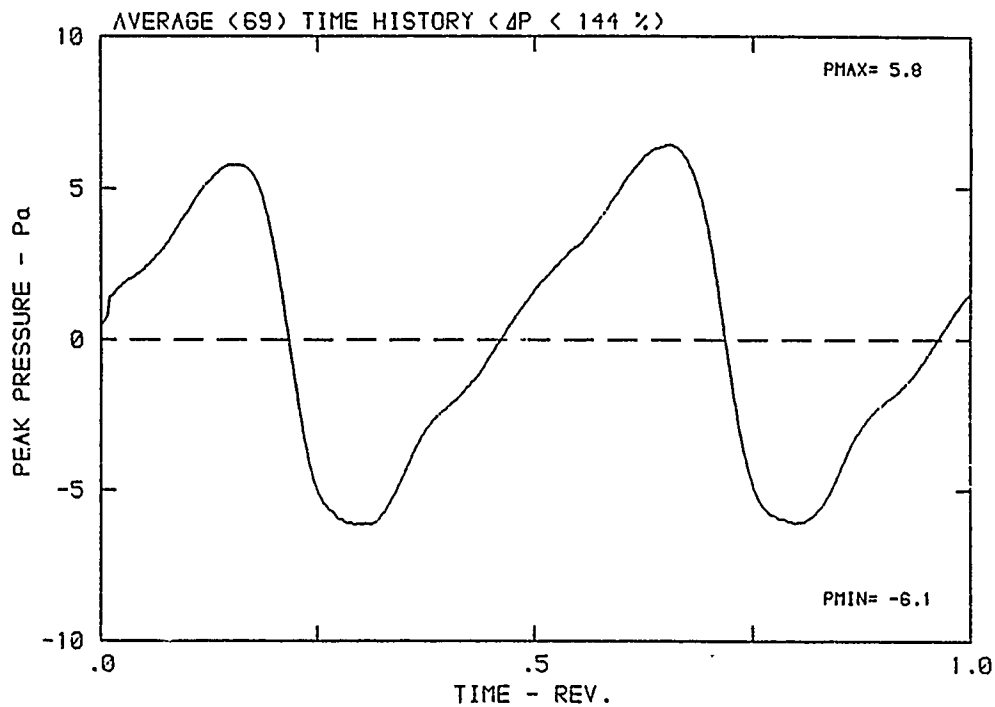
DATA POINT: BN-1      RUN: 58      MP: 9

$\beta$ : 19.9°    MH: .5727    n: 1800 rpm    v/u: .179     $\phi$ : .0°    T: 297.1 K



DATA POINT: BN-1      RUN: 58      MP: 9

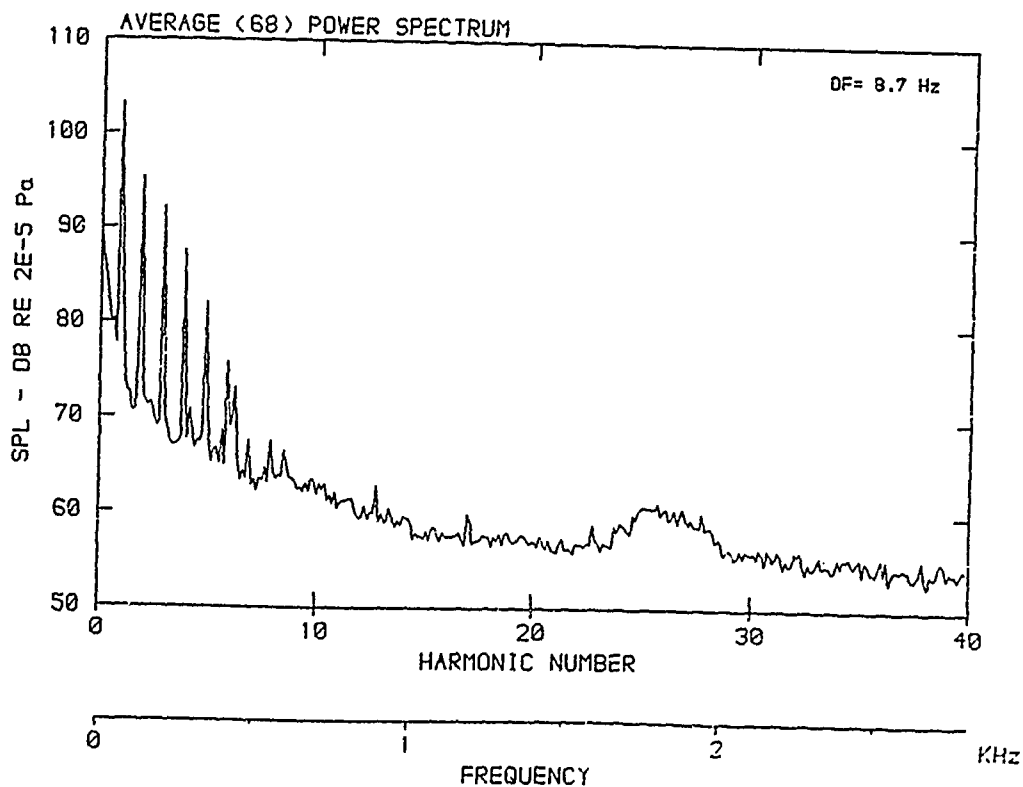
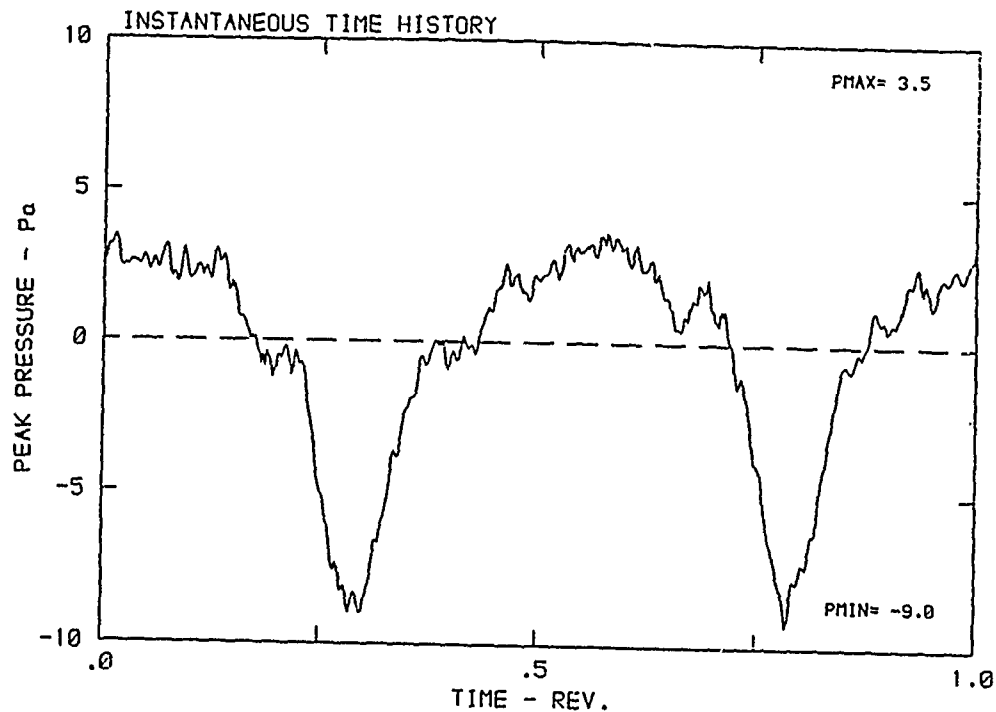
$\beta$ : 19.9°    MH: .5727     $\eta$ : 1800 rpm     $v/u$ : .179     $\phi$ : .0°     $T$ : 287.1 K





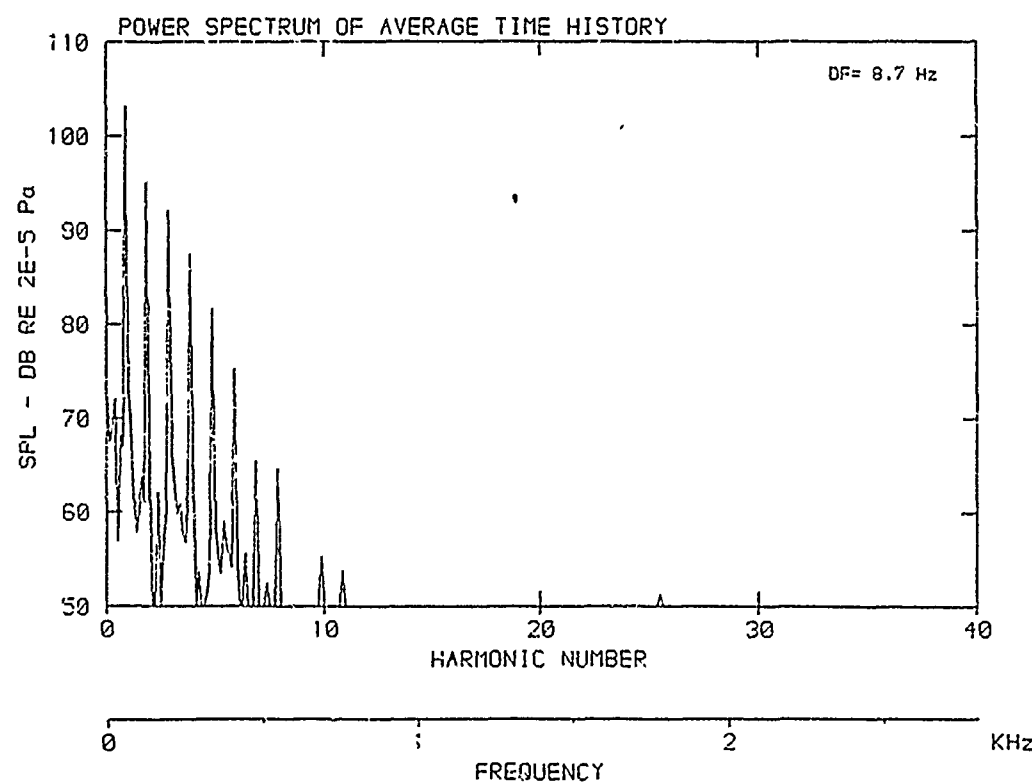
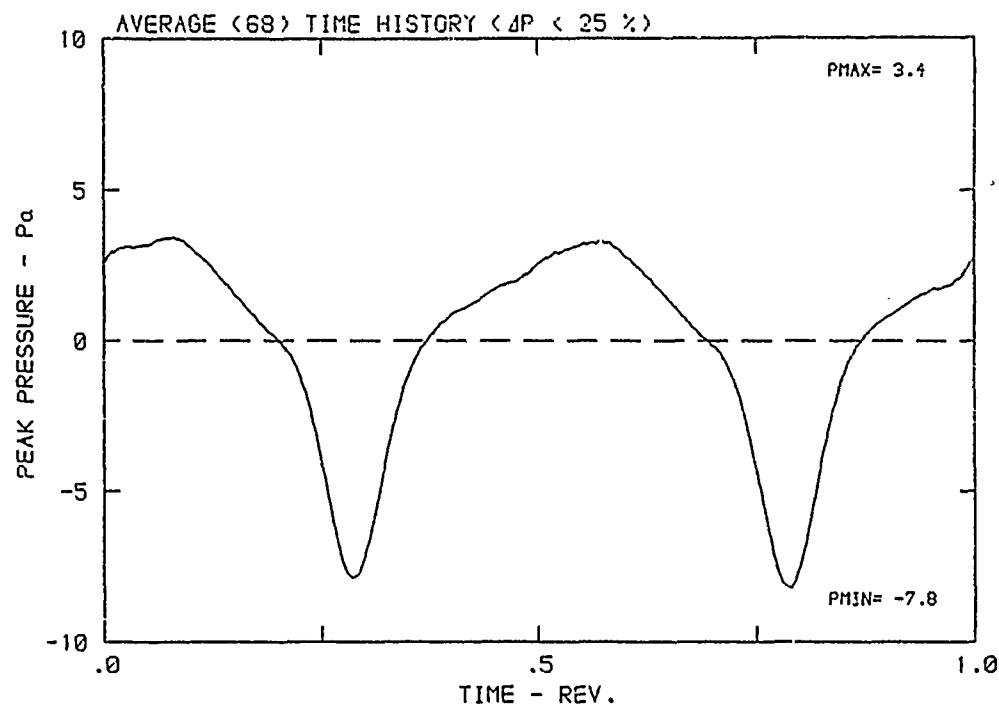
DATA POINT: BN-2 RUN: 57 MP: 1

$\beta$ : 19.9° MH: .6682 n: 2100 rpm v/u: .180  $\phi$ : .0° T: 287.2 K



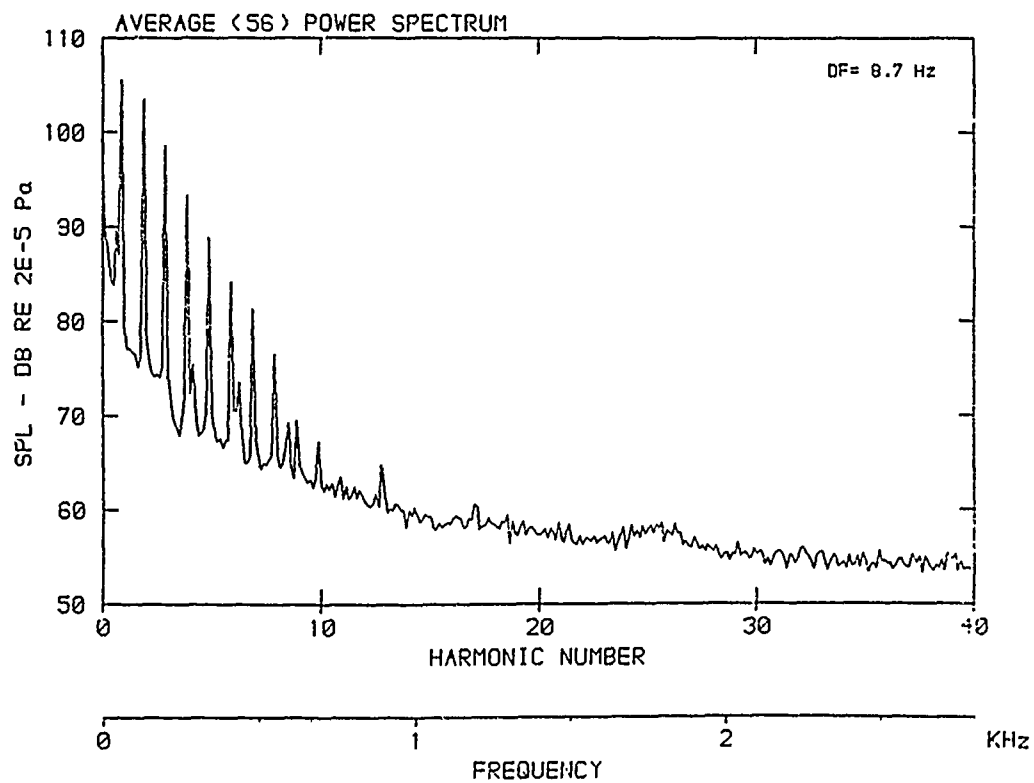
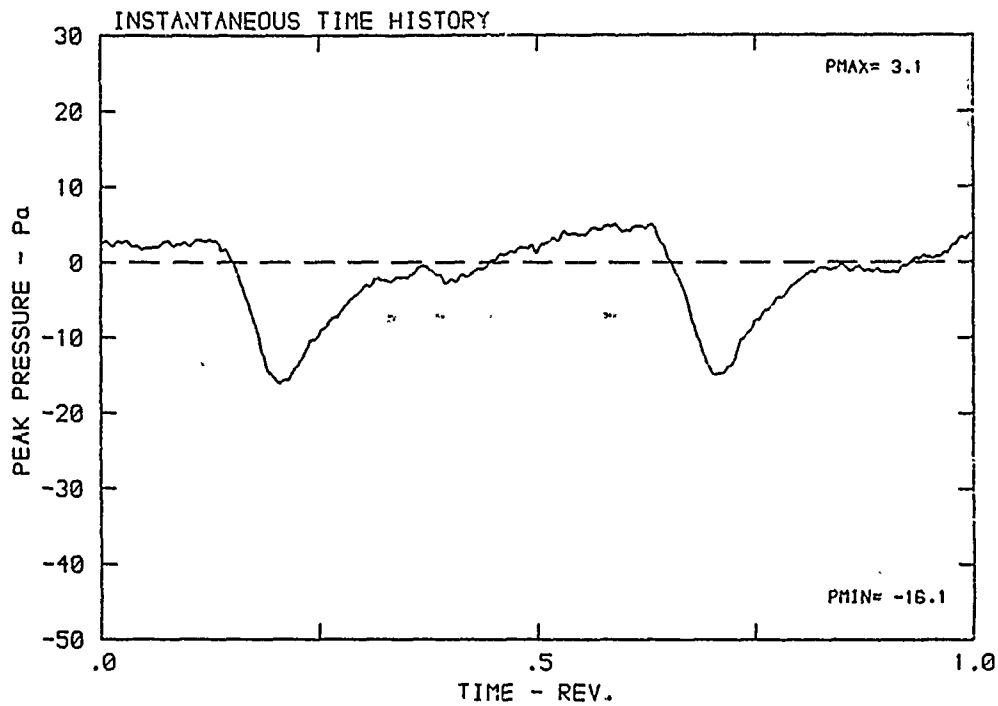
DATA POINT: BN-2    RUN: 57    MP: 1

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm     $v/u$ : .180     $\phi$ : .0°    T: 287.2 K



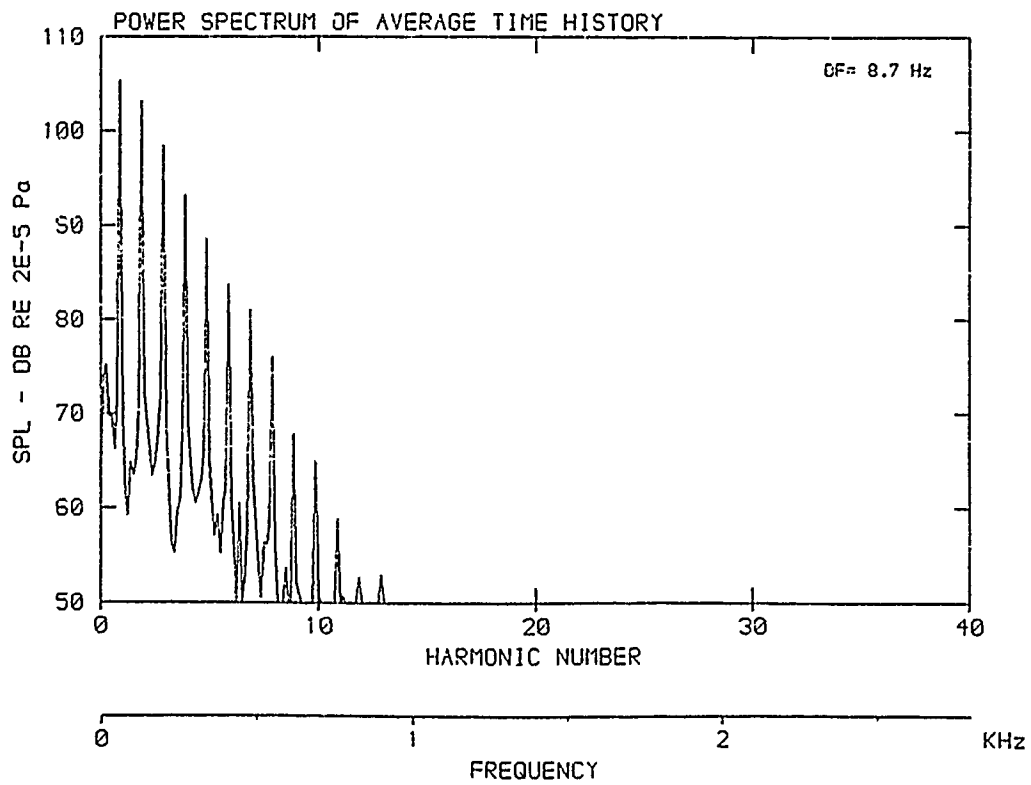
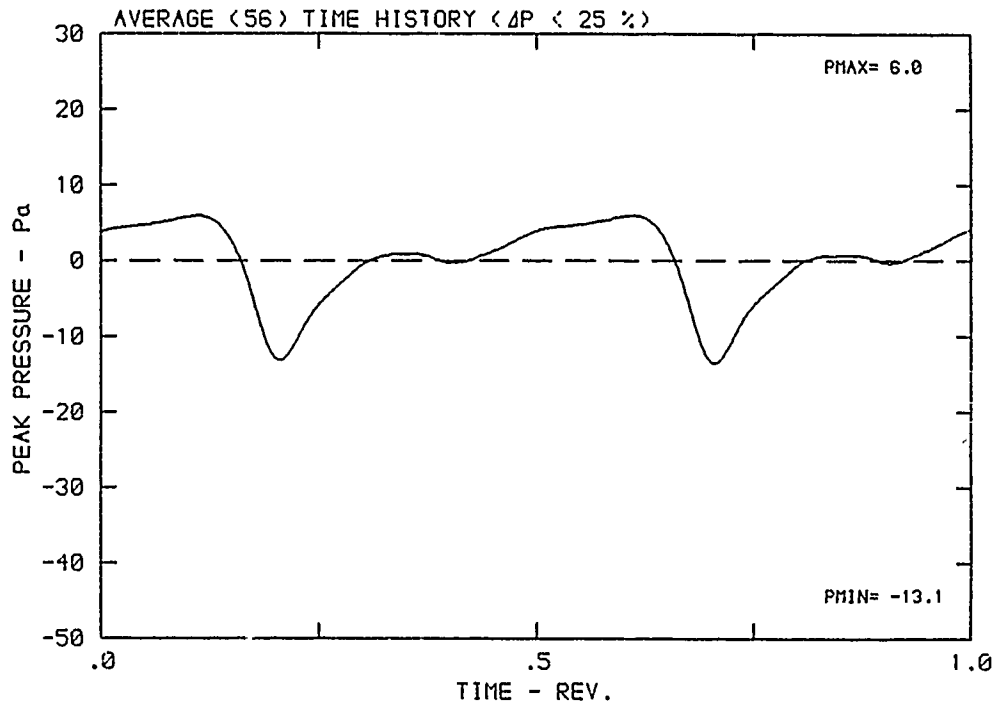
DATA POINT: BN-2 RUN: 57 MP: 2

$\beta$ : 19.9° MH: .6682 n: 2100 rpm v/u: .180  $\phi$ : .0° T: 287.2 K



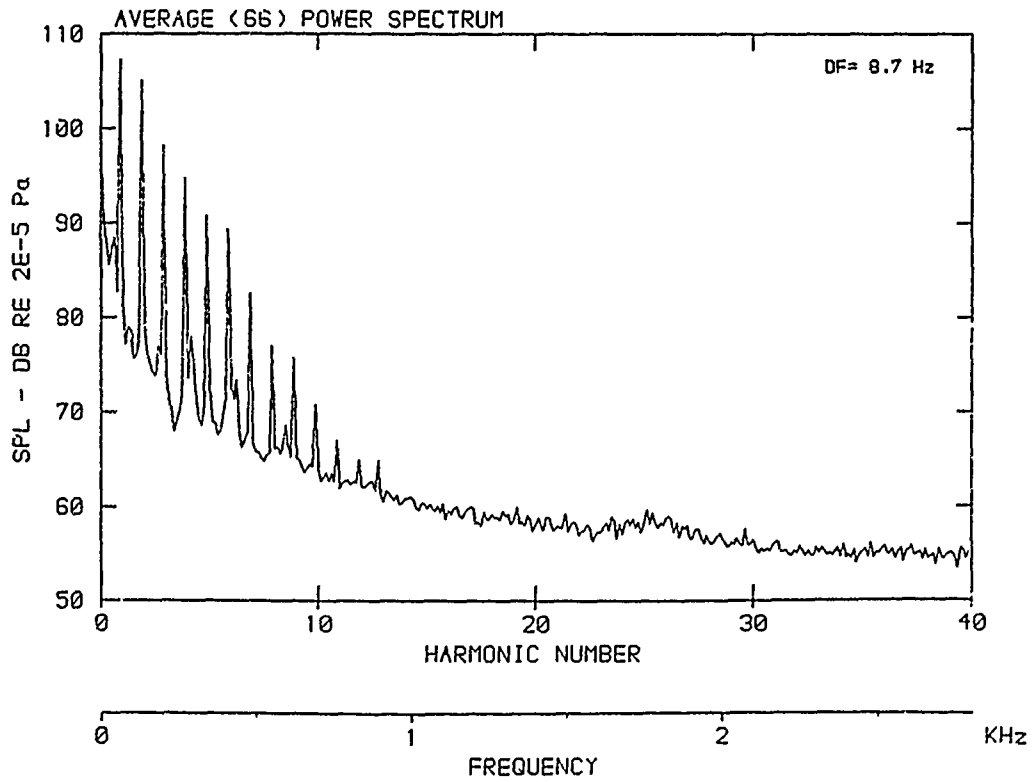
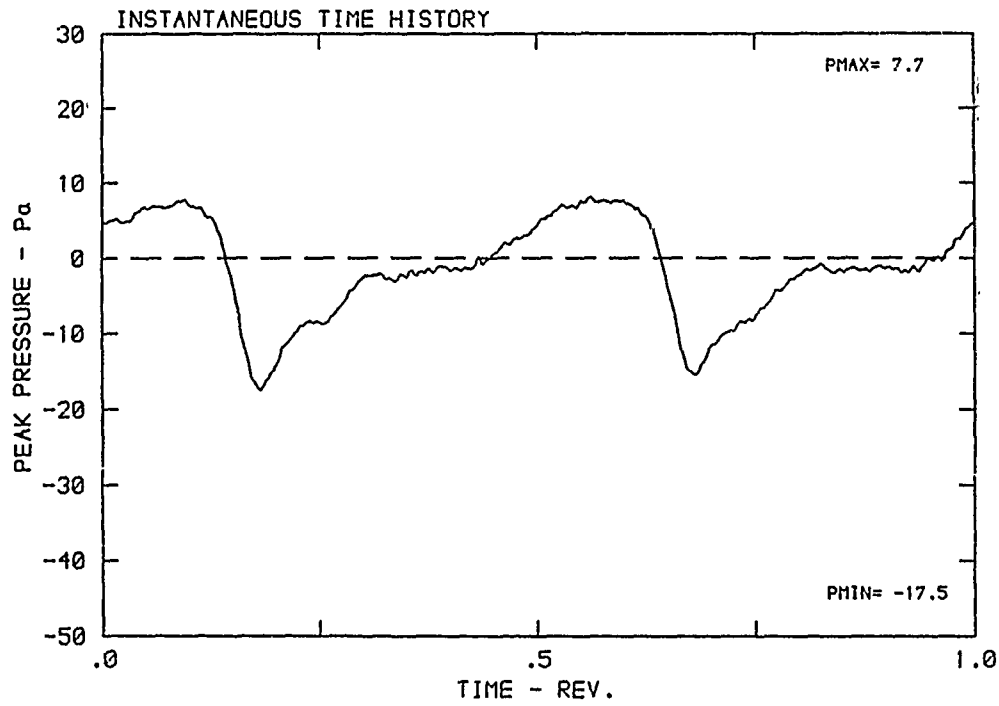
DATA POINT: BN-2      RUN: 57      MP: 2

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K



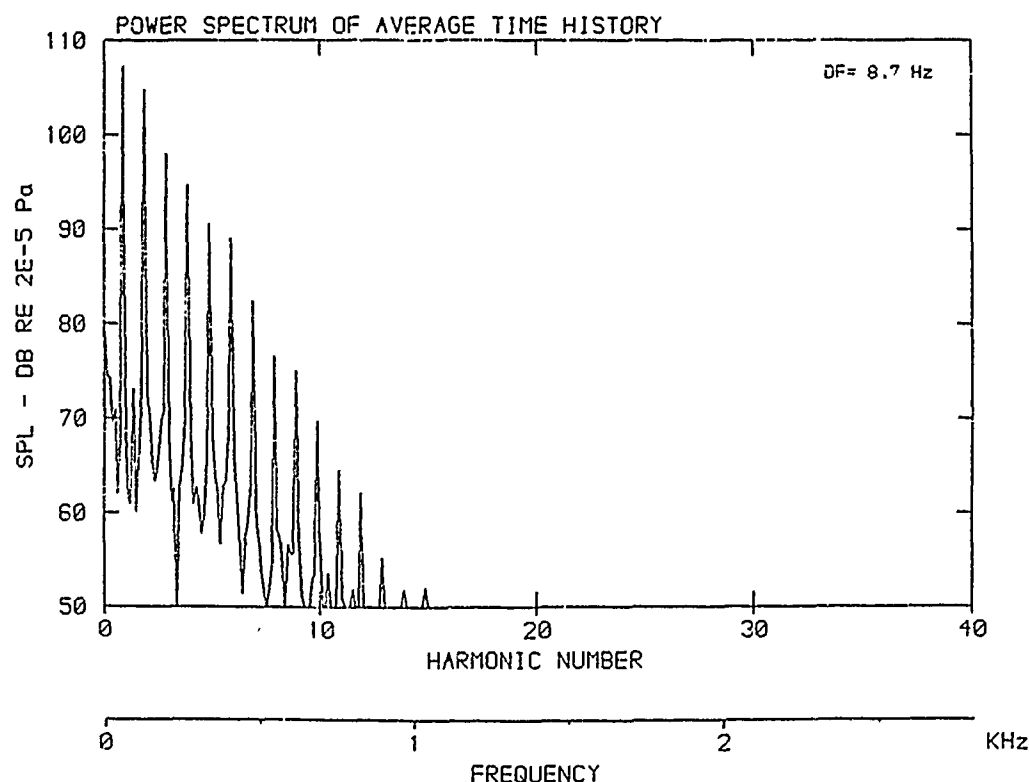
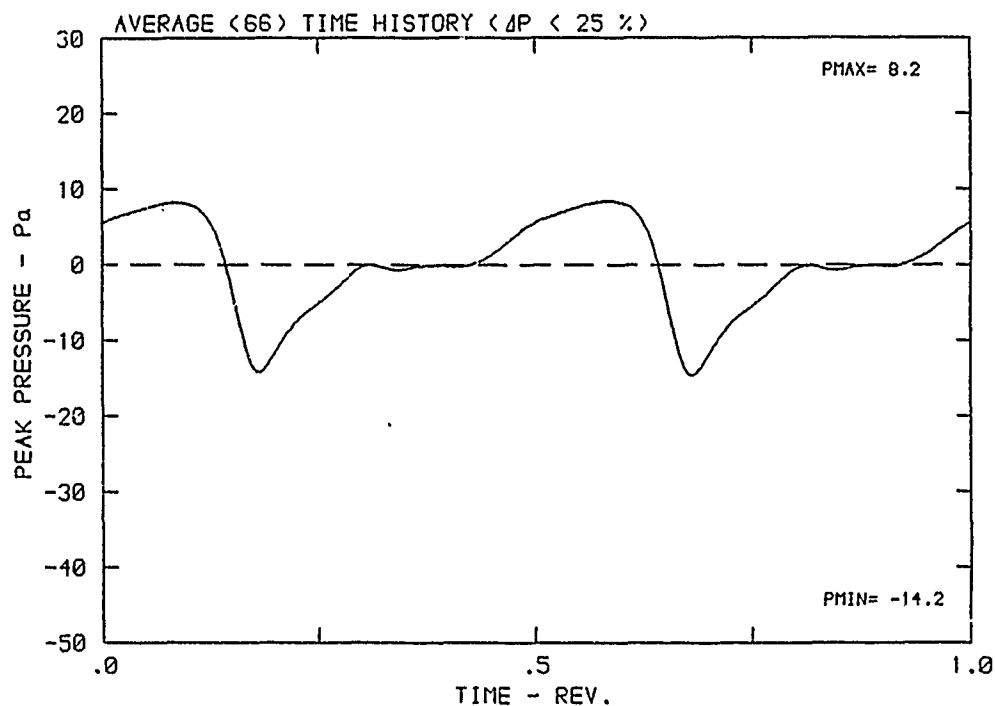
DATA POINT: BN-2    RUN: 57    MP: 3

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm     $v/u$ : .180     $\phi$ : .0°    T: 287.2 K



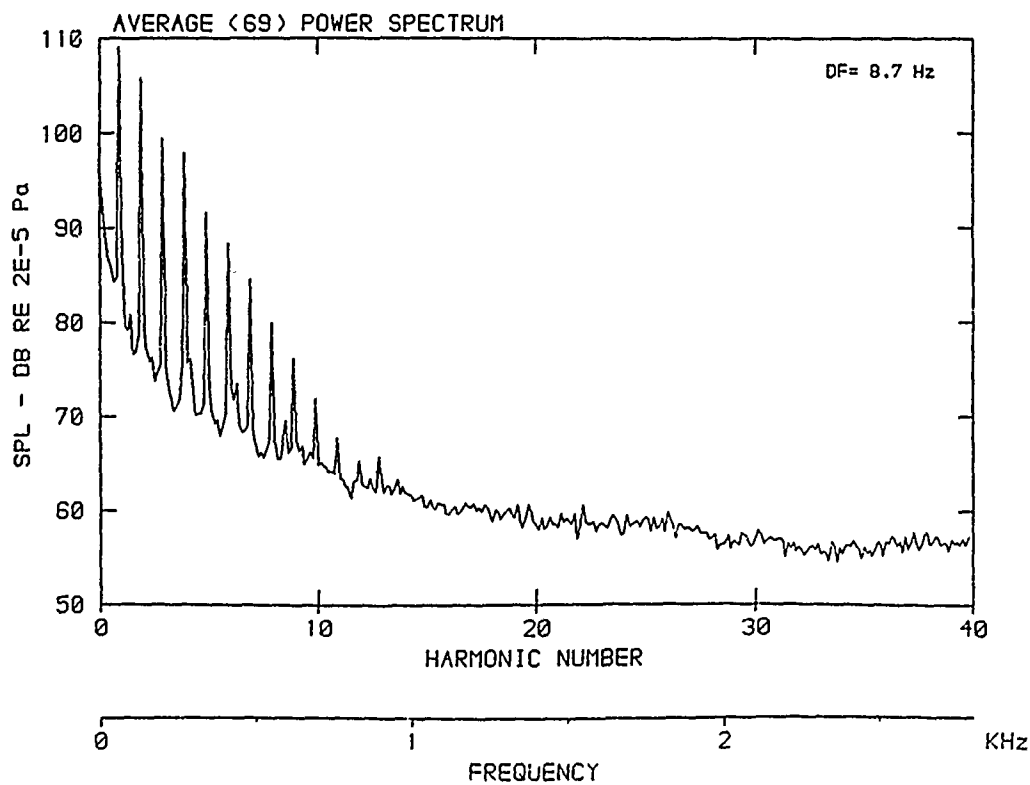
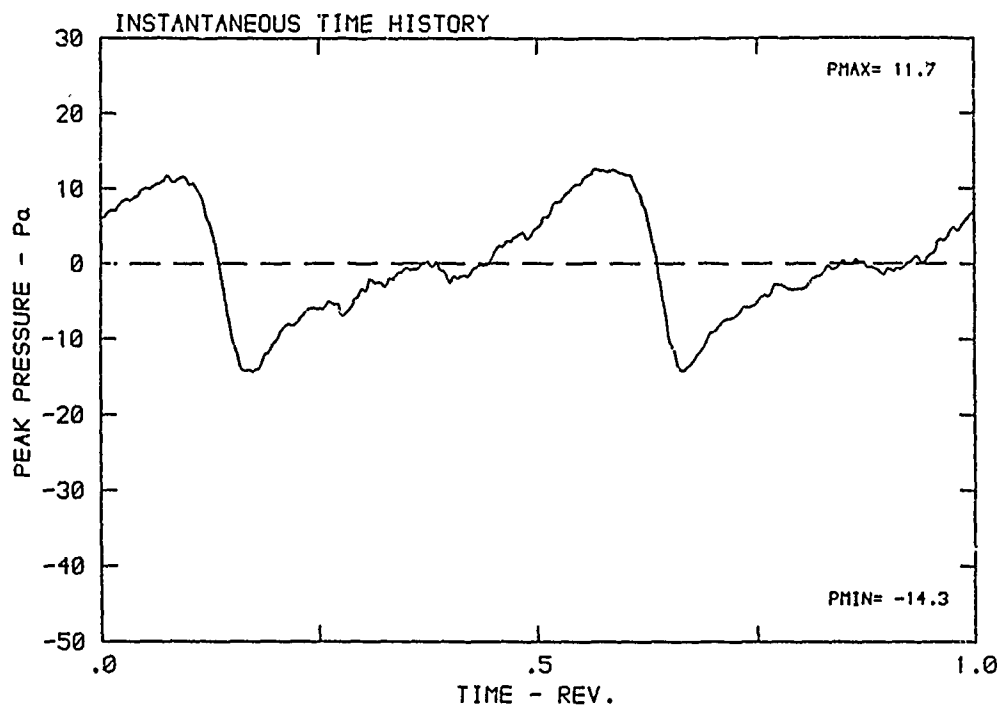
DATA POINT: BN-2 RUN: 57 MP: 3

$\beta$ : 19.9° MH: .6682 n: 2100 rpm  $v/u$ : .180  $\phi$ : .0° T: 287.2 K



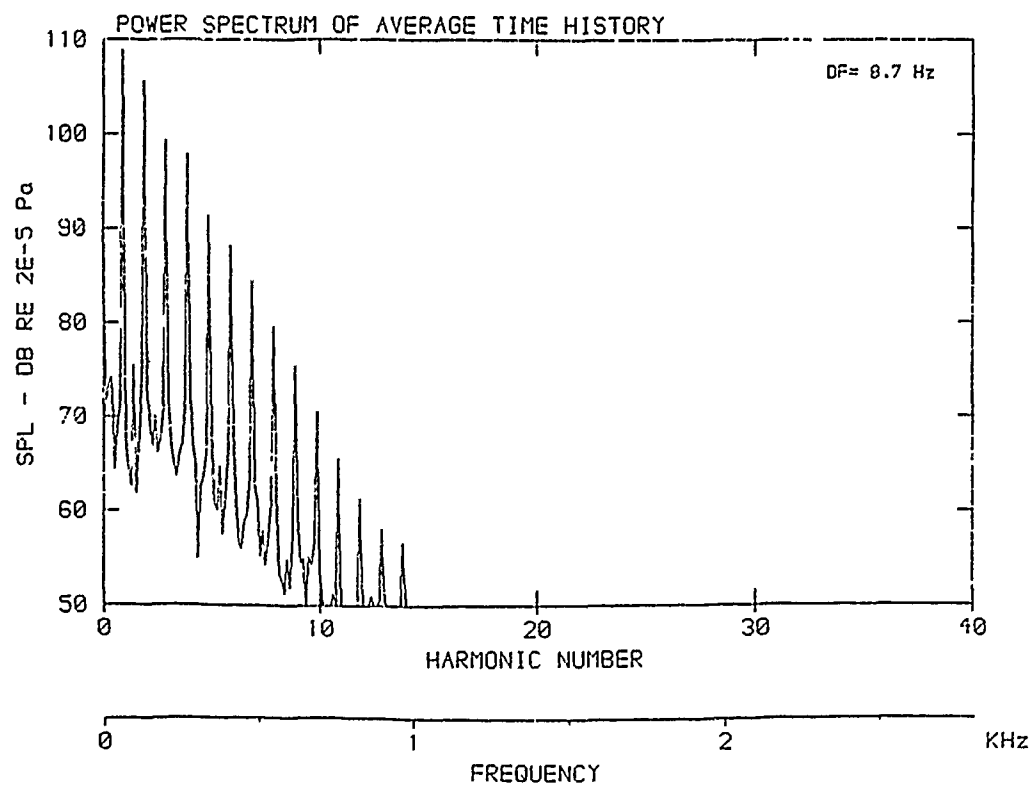
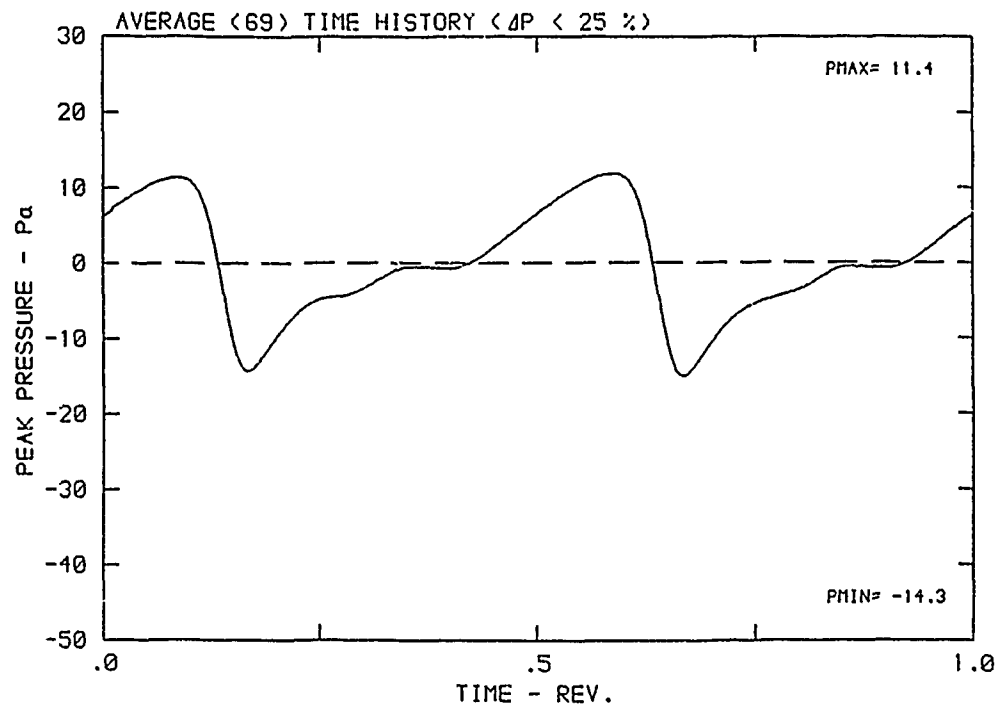
DATA POINT: BN-2    RUN: 57    MP: 4

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm     $v/u$ : .180     $\phi$ : .0°    T: 287.2 K



DATA POINT: BN-2      RUN: 57      MP: 4

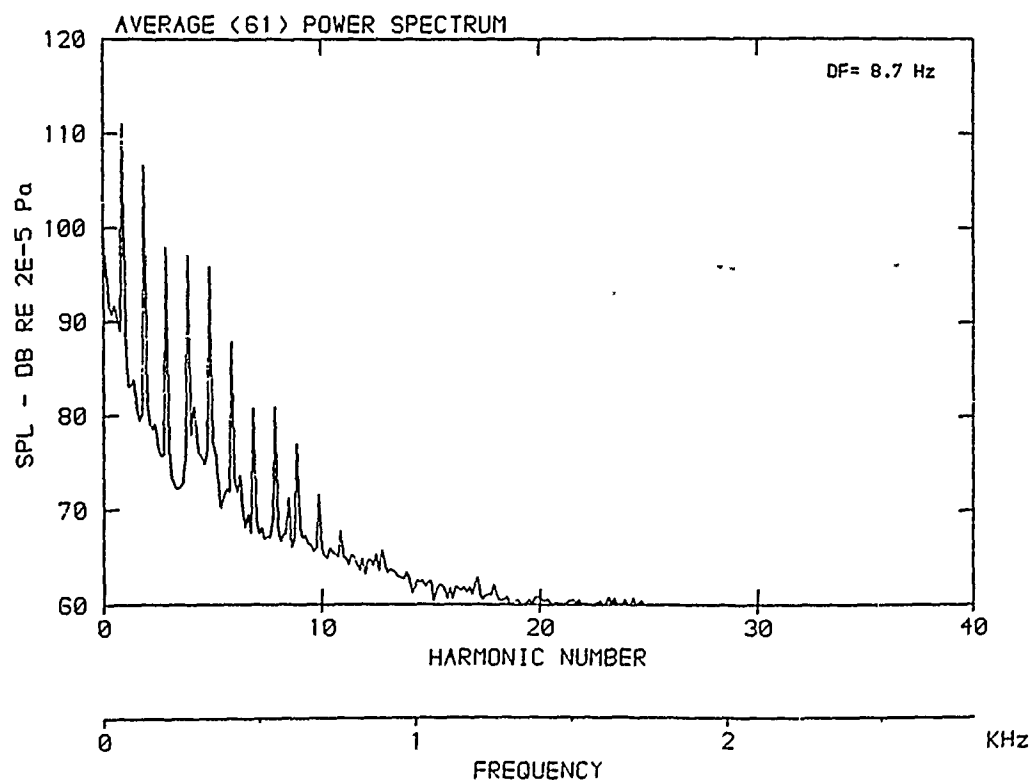
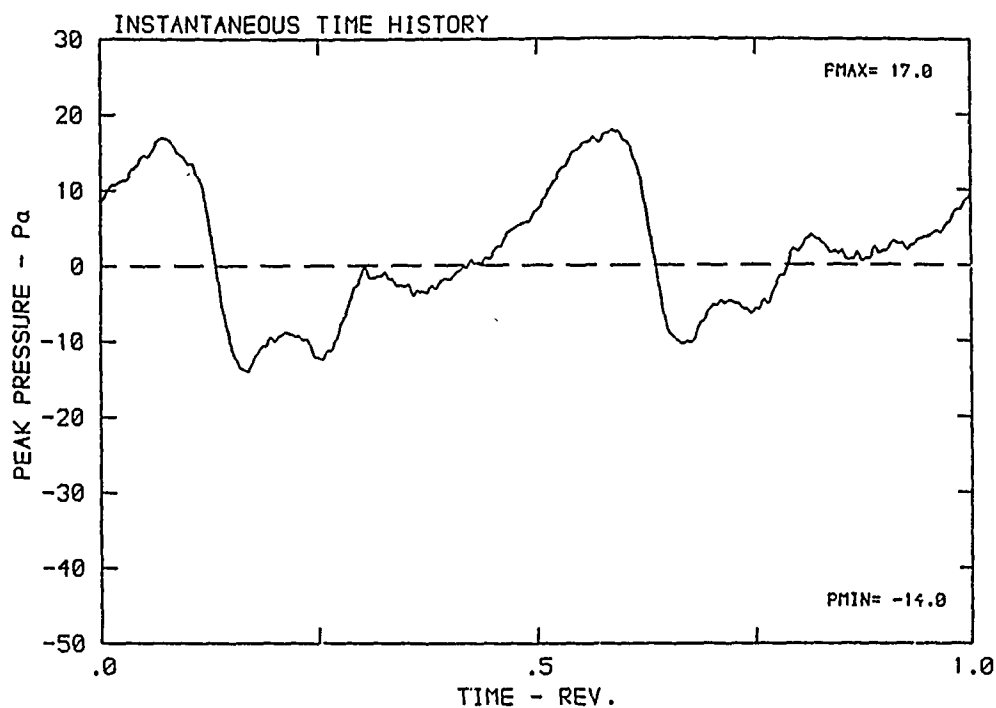
$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K





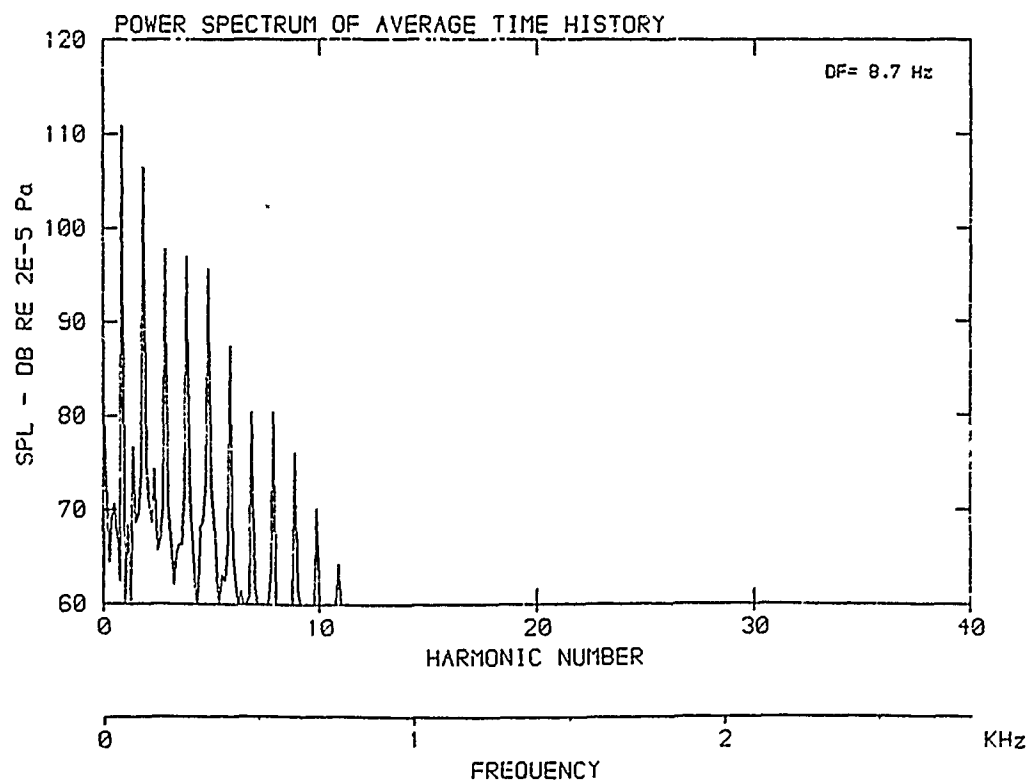
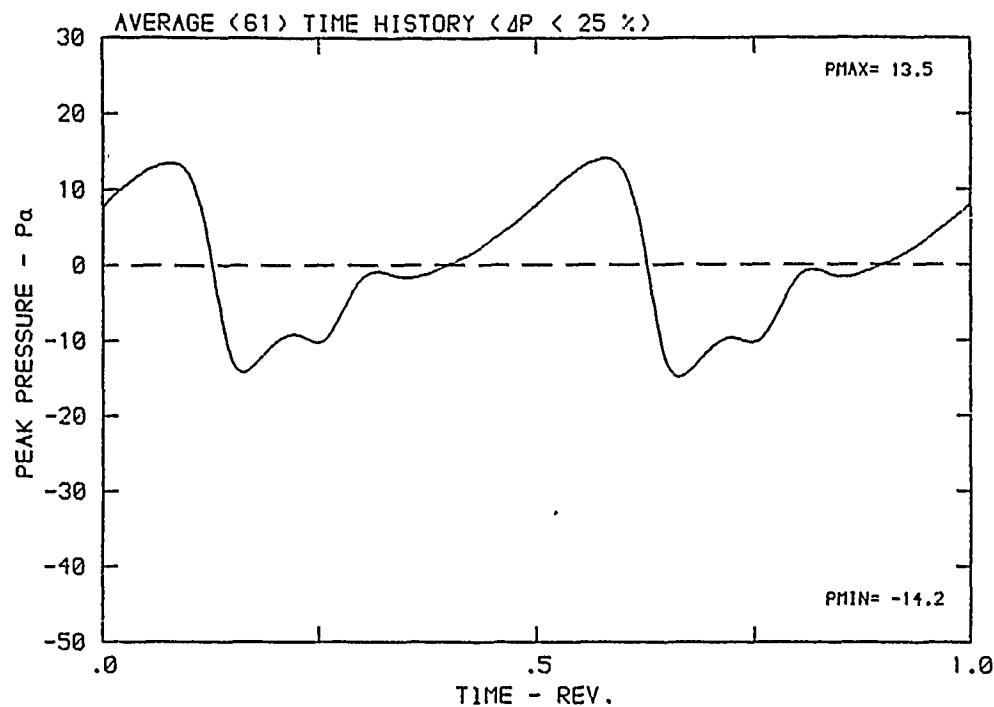
DATA POINT: BN-2    RUN: 57    MP: 5

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K



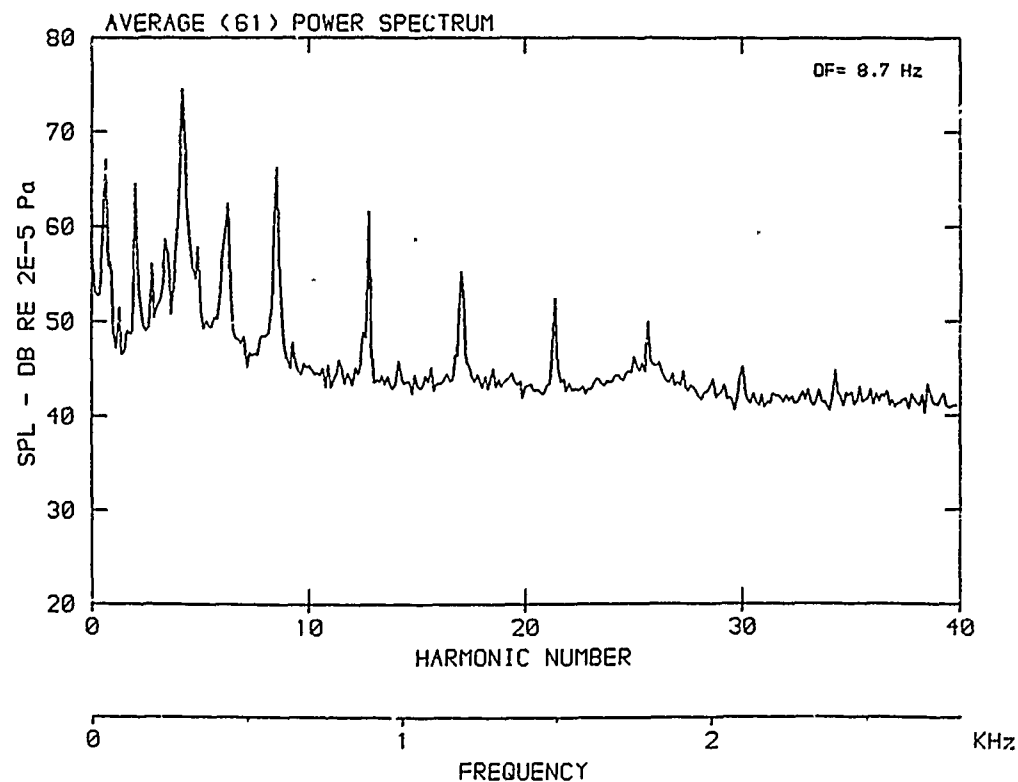
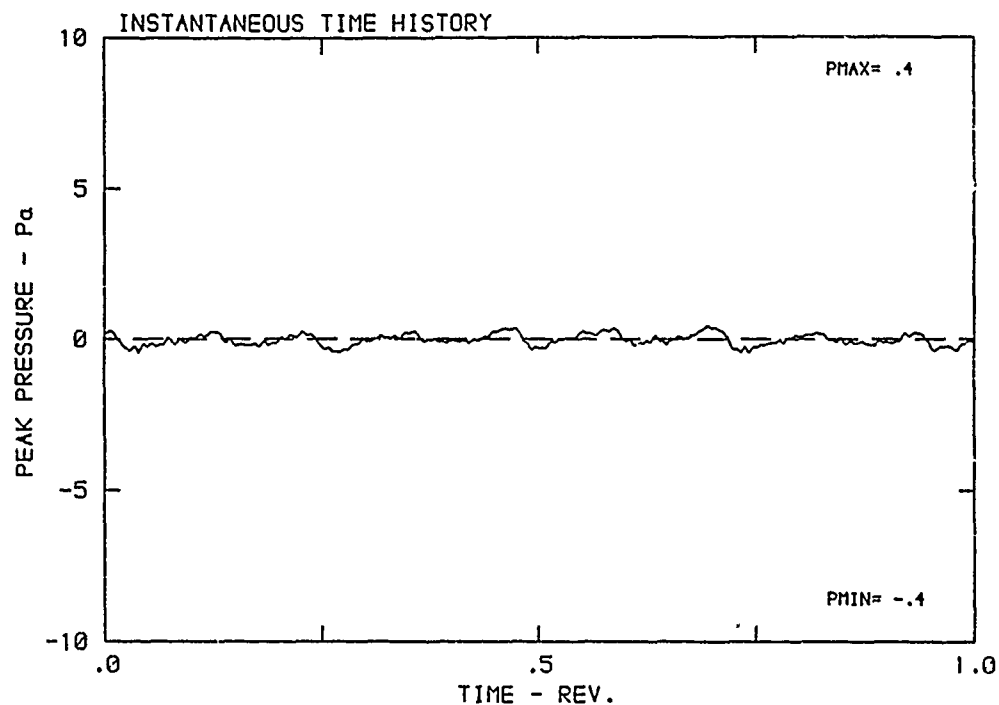
DATA POINT: BN-2 RUN: 57 MP: 5

$\beta$ : 19.9° MH: .6682 n: 2100 rpm  $v/u$ : .180  $\phi$ : .0° T: 287.2 K



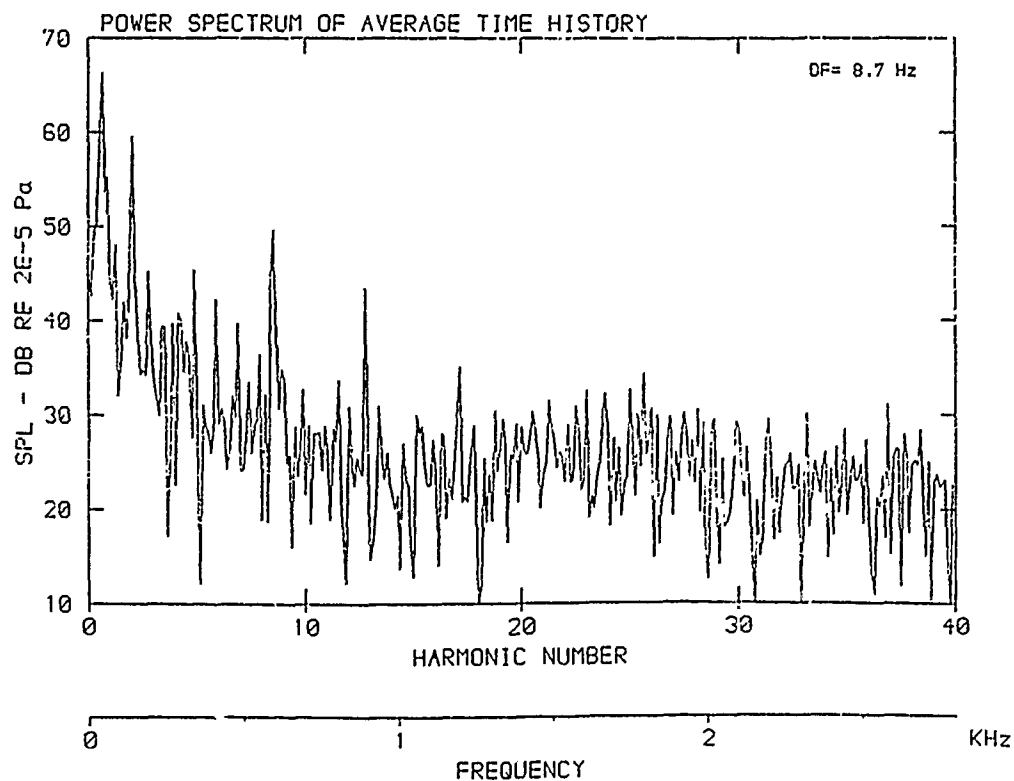
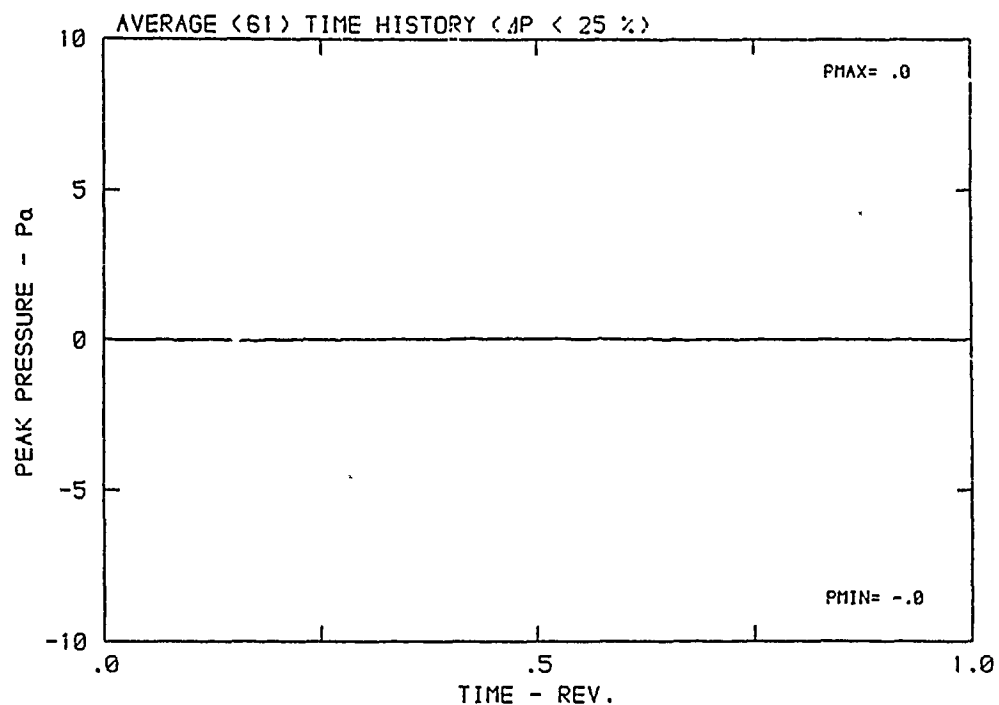
DATA POINT: BN-2    RUN: 57    MP: 6

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm     $v/u$ : .180     $\phi$ : .0°    T: 287.2 K



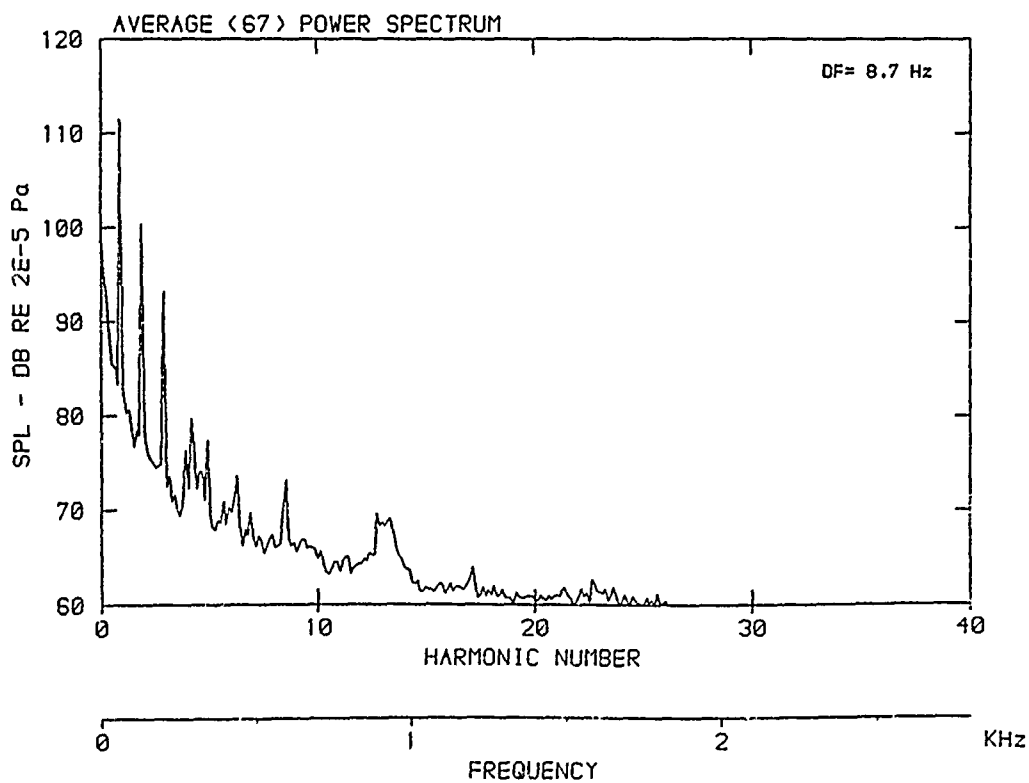
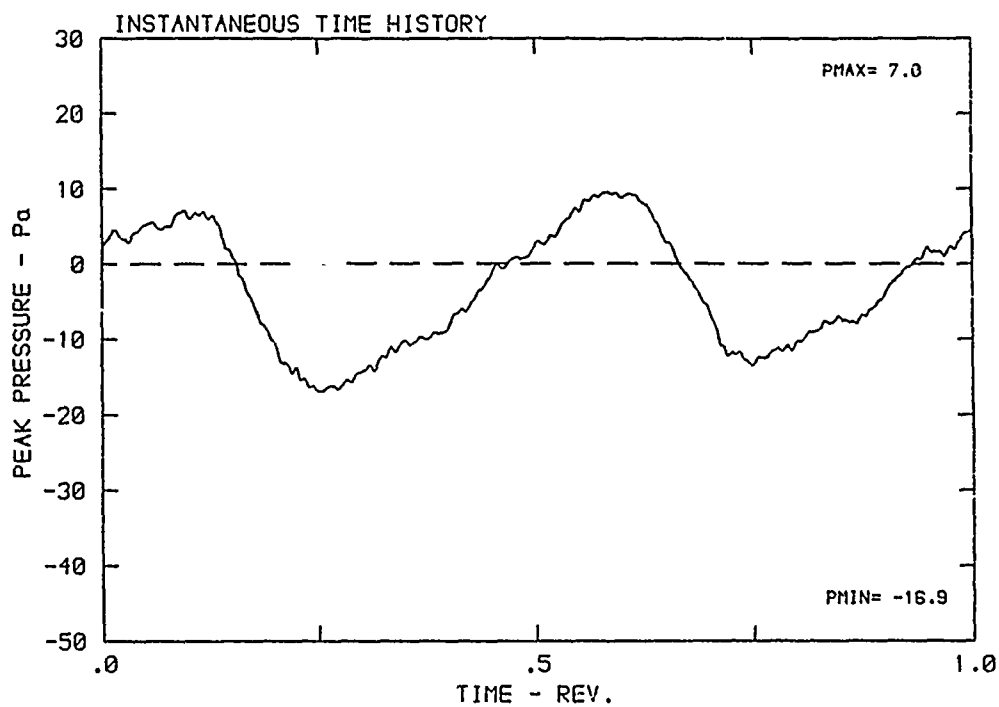
DATA POINT: BN-2    RUN: 57    MP: 6

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K



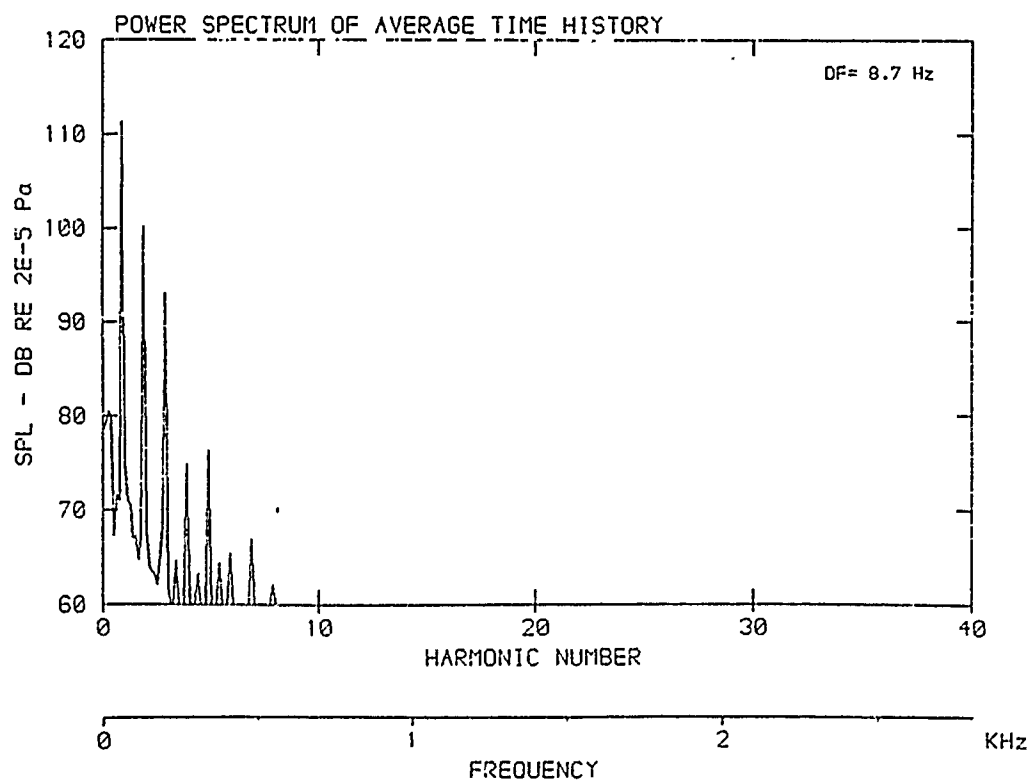
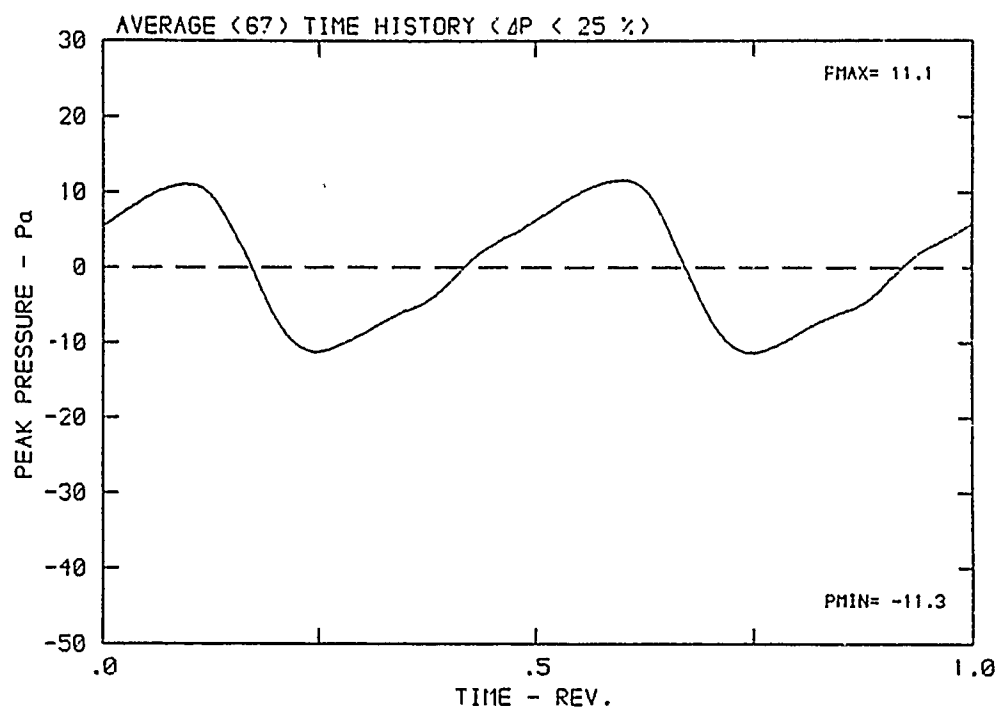
DATA POINT: BN-2 RUN: 57 MP: 7

$\beta$ : 19.9° MH: .6682 n: 2100 rpm  $v/u$ : .180  $\phi$ : .0° T: 287.2 K



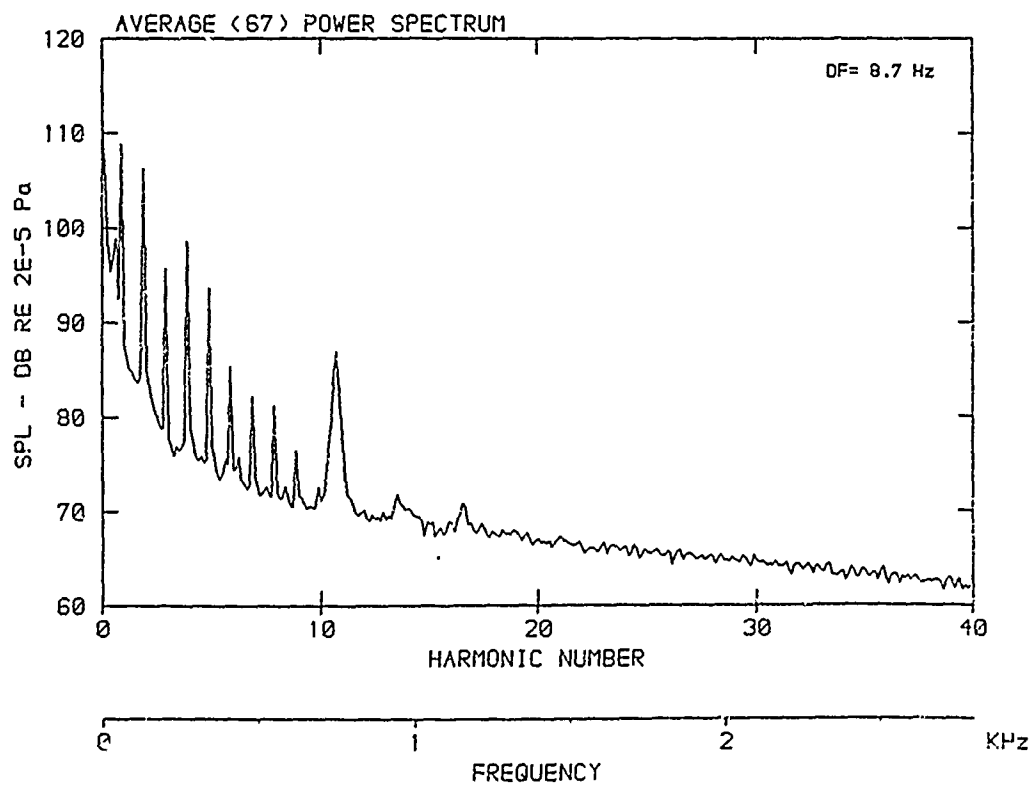
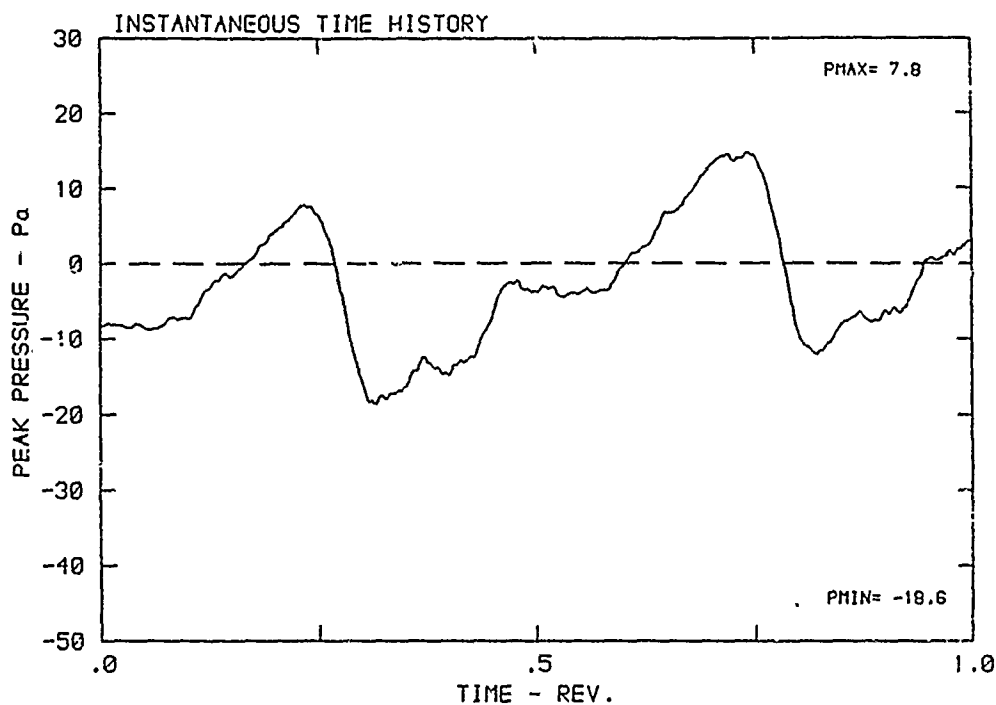
DATA POINT: BN-2    RUN: 57    MP: 7

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K



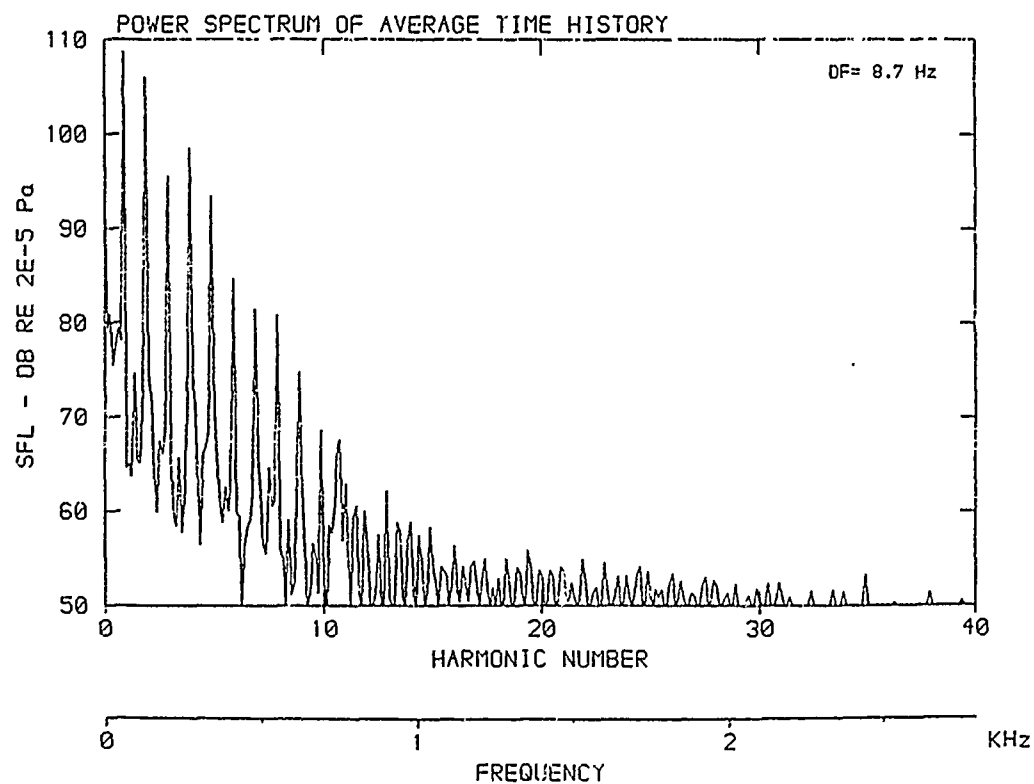
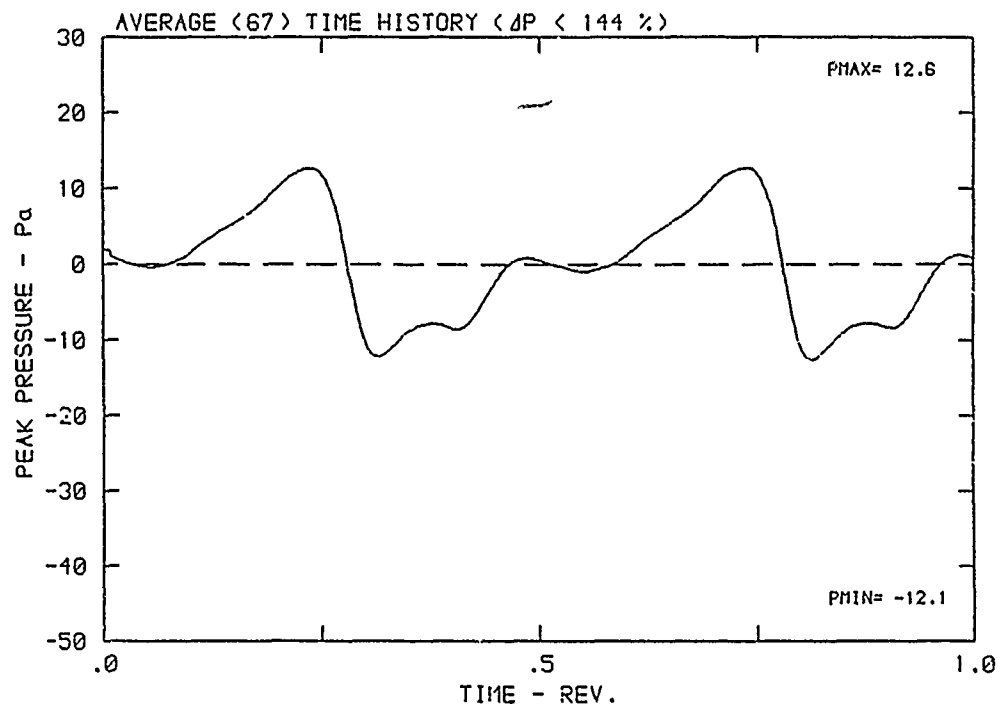
DATA POINT: BN-2    RUN: 57    MP: 9

$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K



DATA POINT: BN-2    RUN: 57    MP: 9

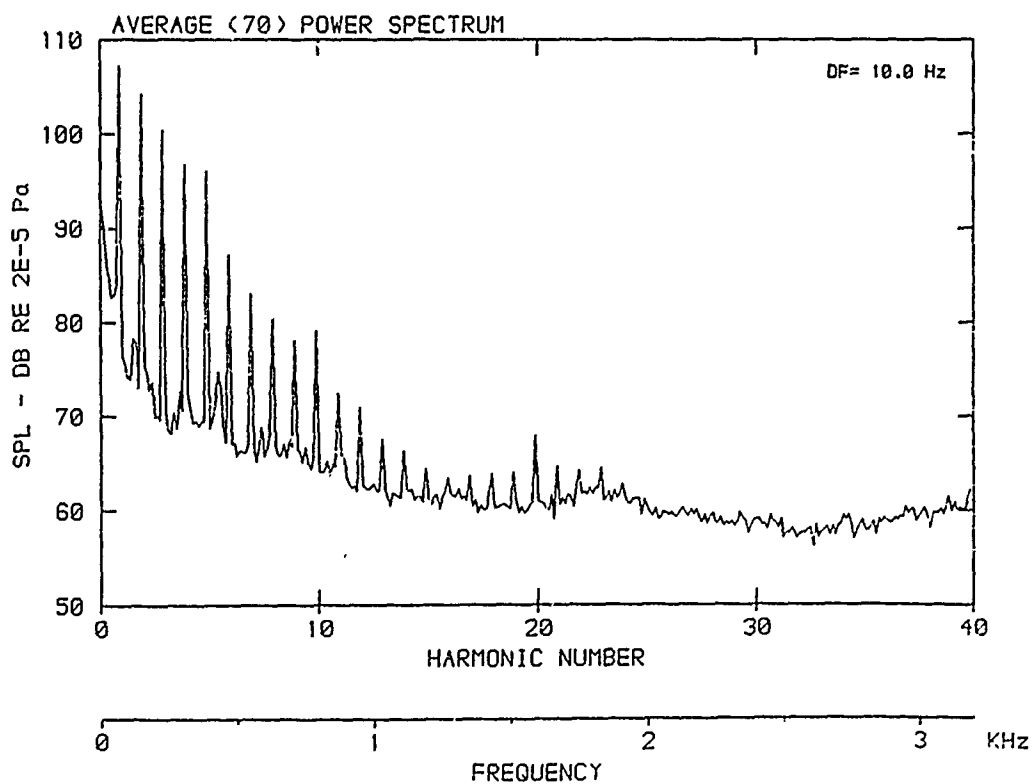
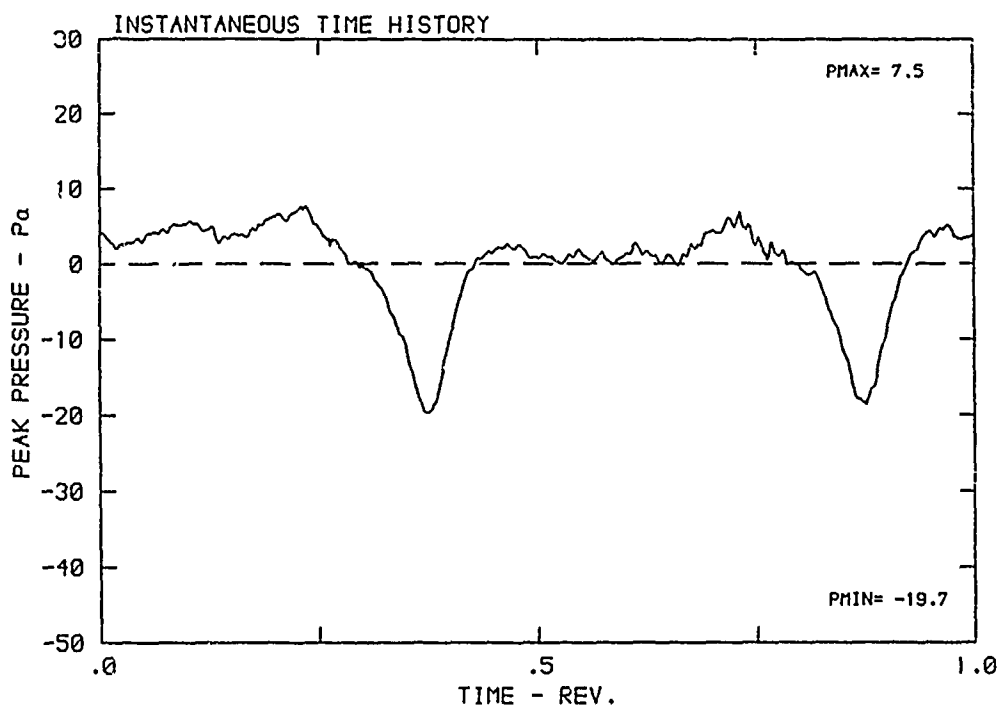
$\beta$ : 19.9°    MH: .6682    n: 2100 rpm    v/u: .180     $\phi$ : .0°    T: 287.2 K





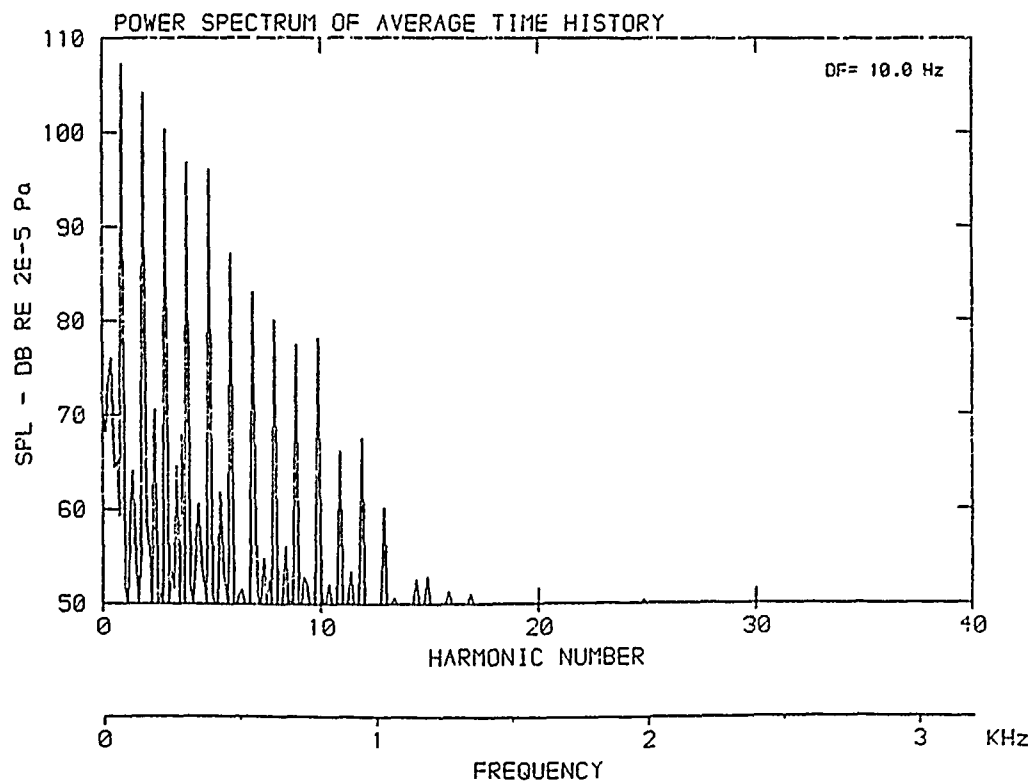
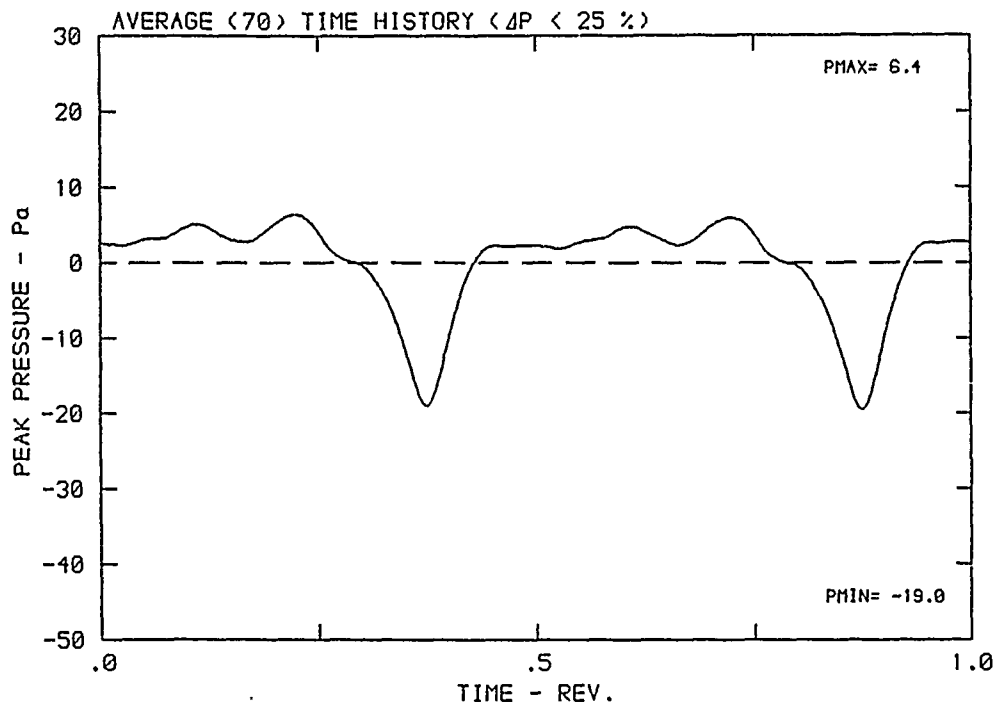
DATA POINT: BN-3 RUN: 56 MP: 1

$\beta$ : 19.9° MH: .7635 n: 2400 rpm v/u: .178  $\phi$ : .0° T: 287.1 K



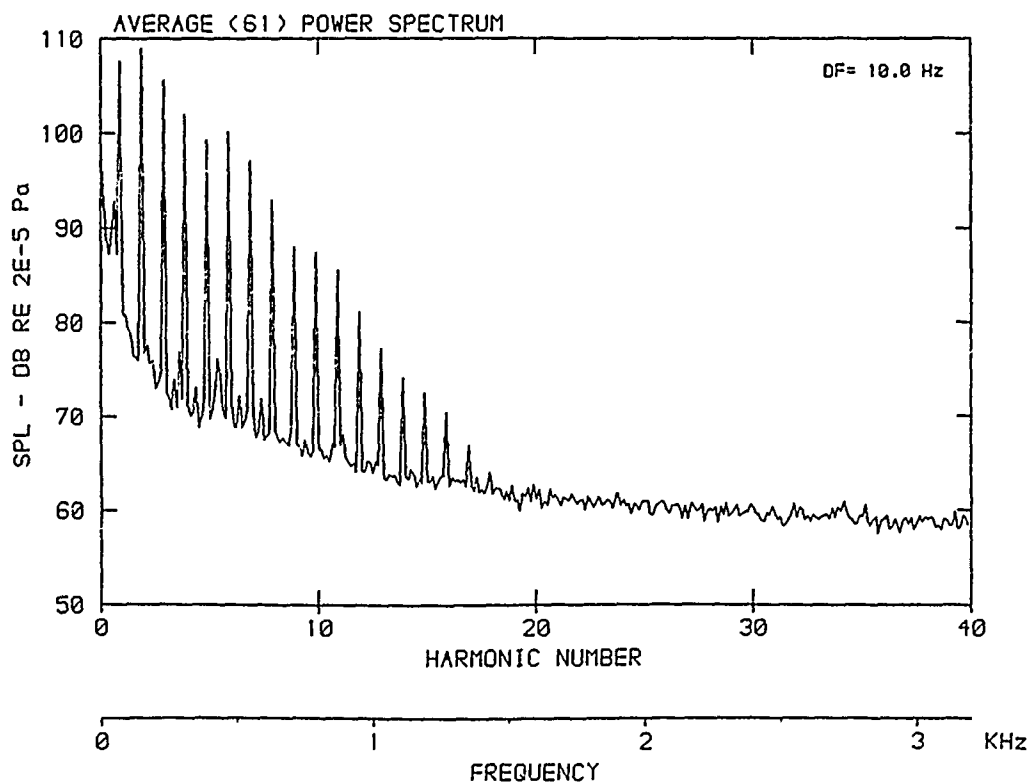
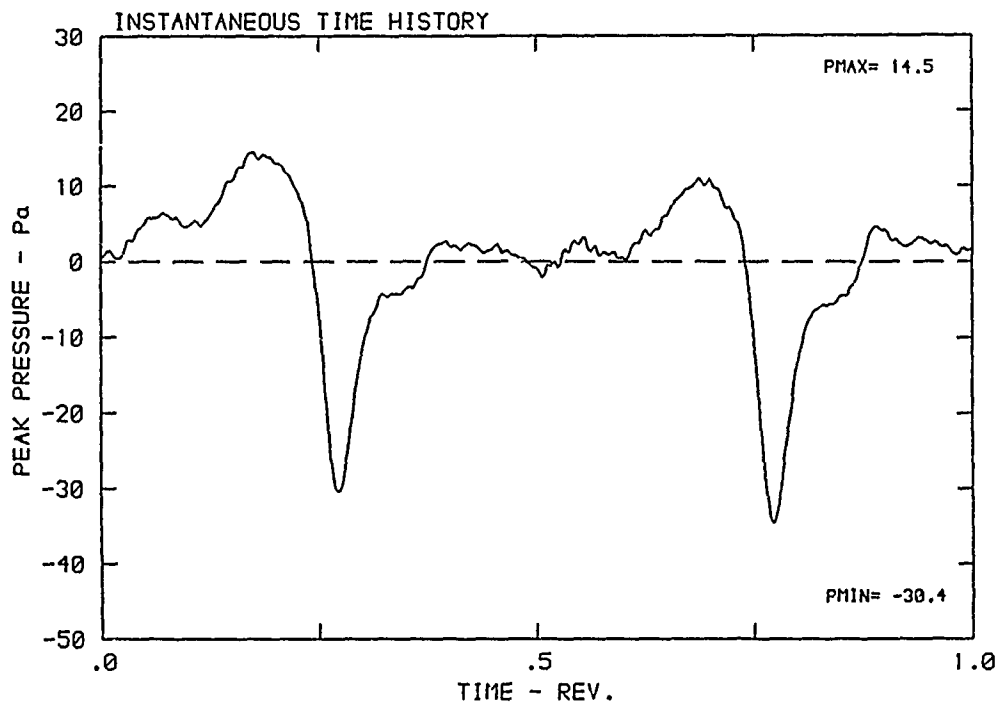
DATA POINT: BN-3    RUN: 56    MP: 1

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm     $v/u$ : .178     $\phi$ : .0°    T: 287.1 K



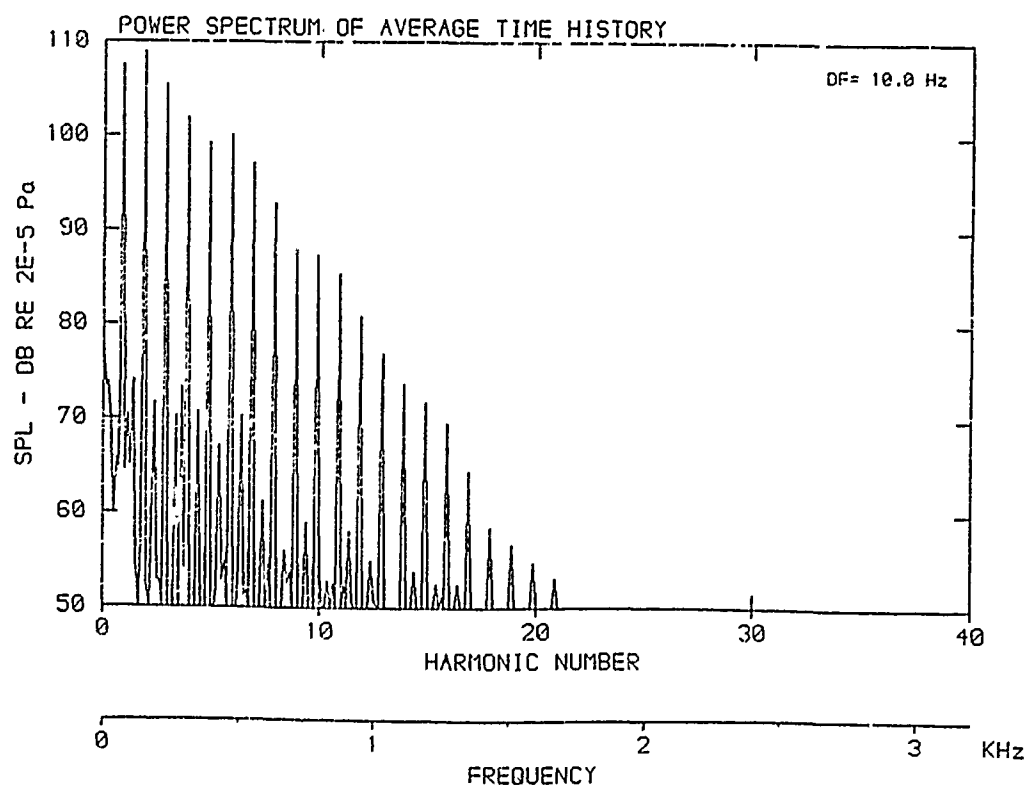
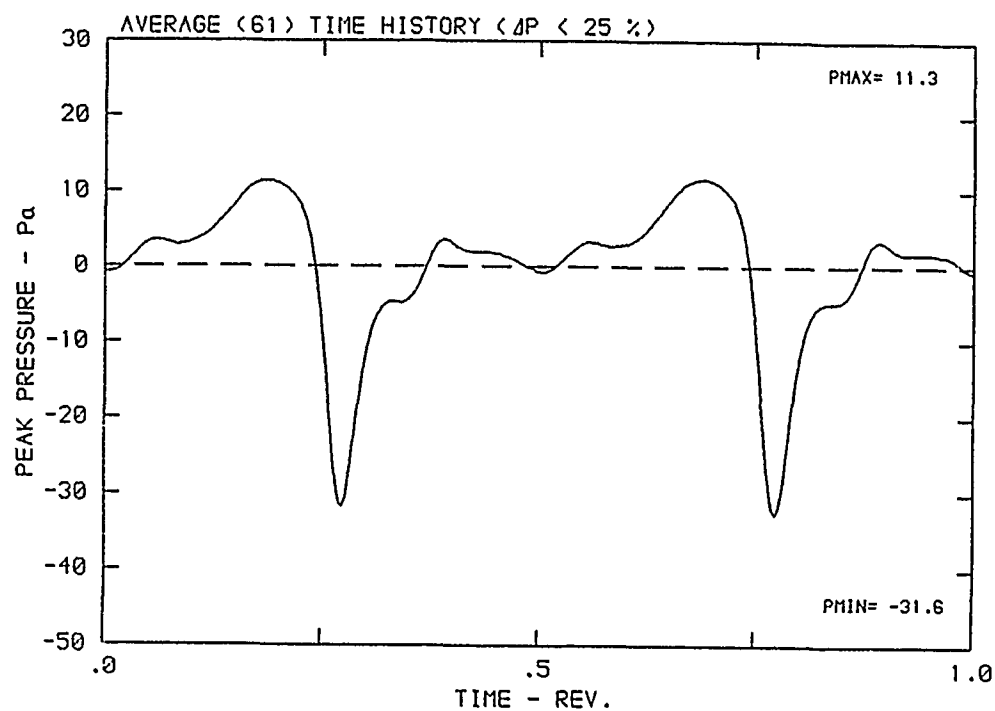
DATA POINT: BN-3      RUN: 56      MP: 2

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



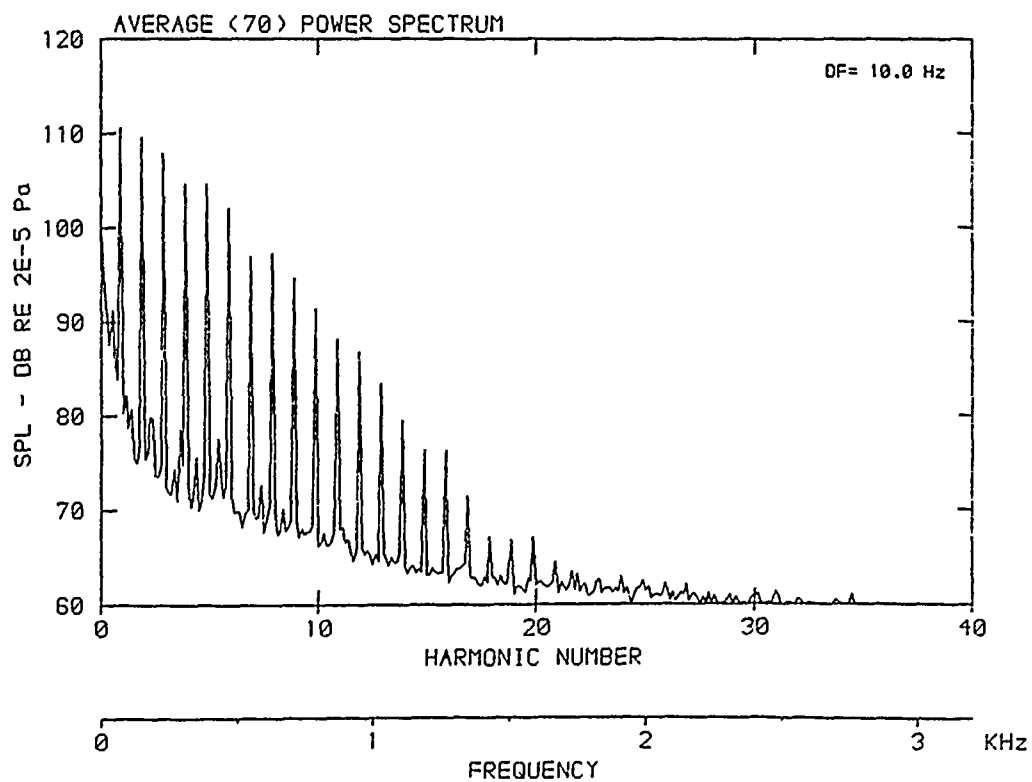
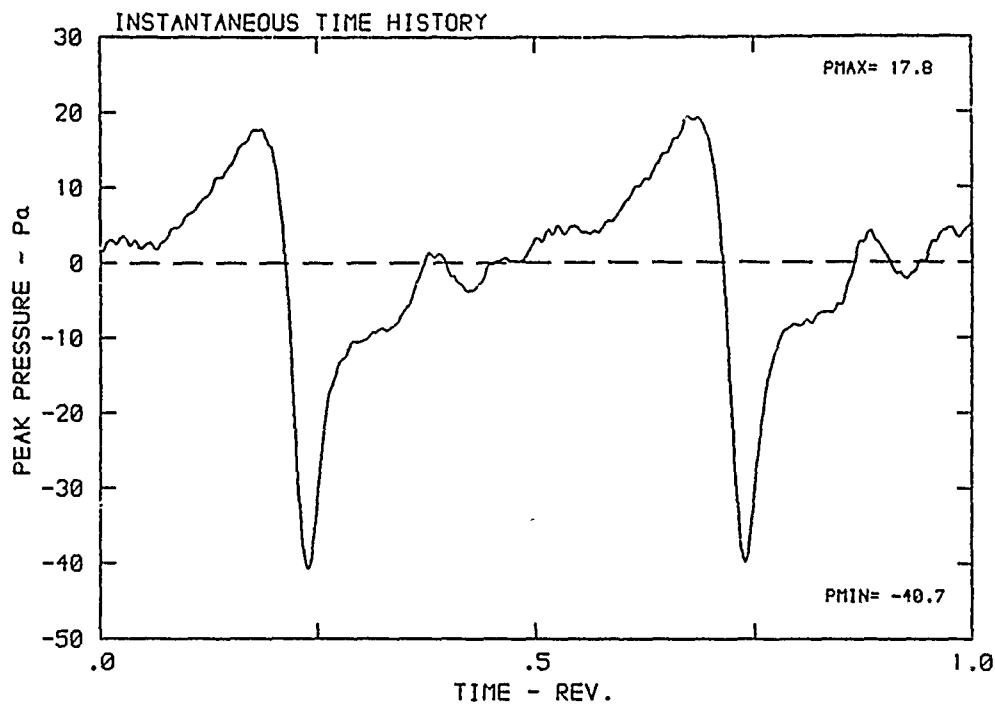
DATA POINT: BN-3      RUN: 56      MP: 2

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



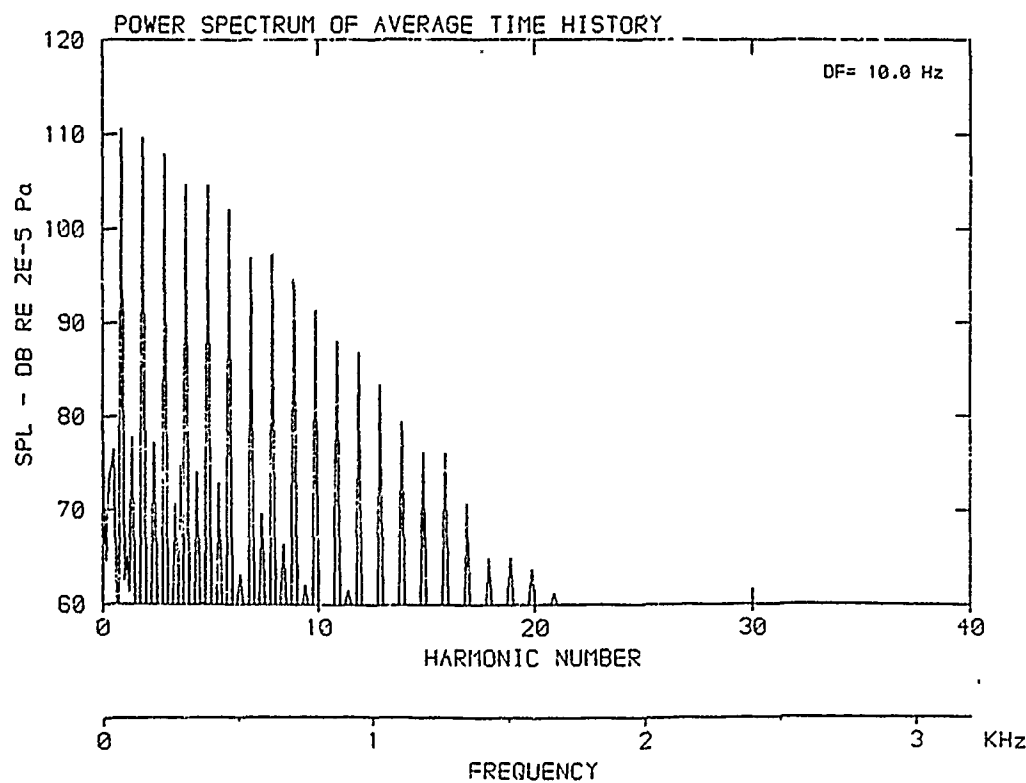
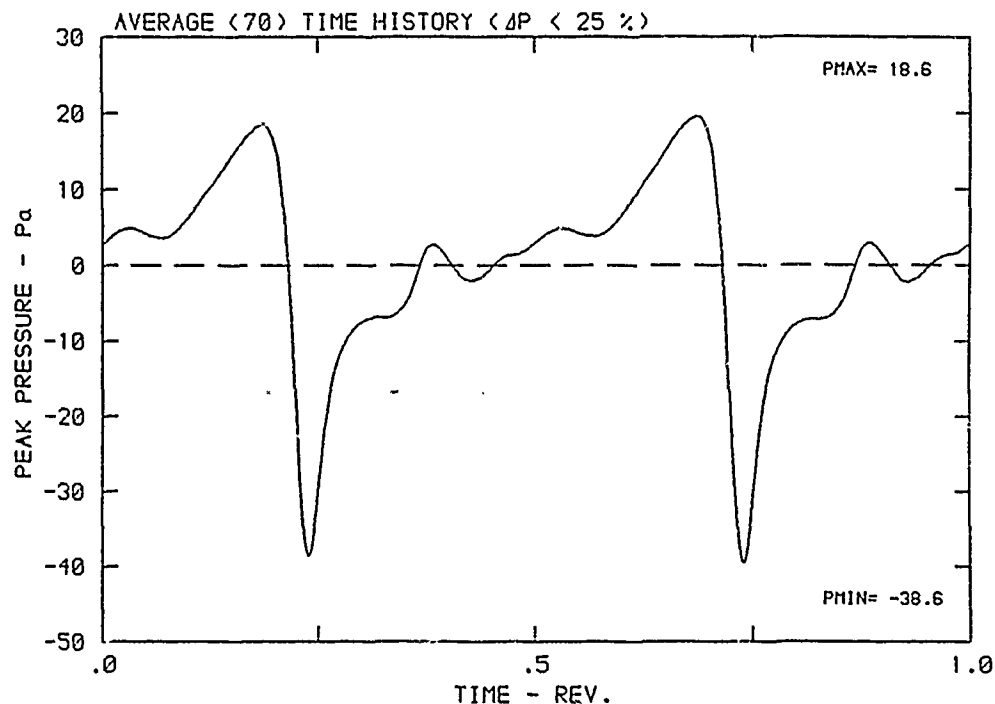
DATA POINT: BN-3    RUN: 56    MP: 3

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



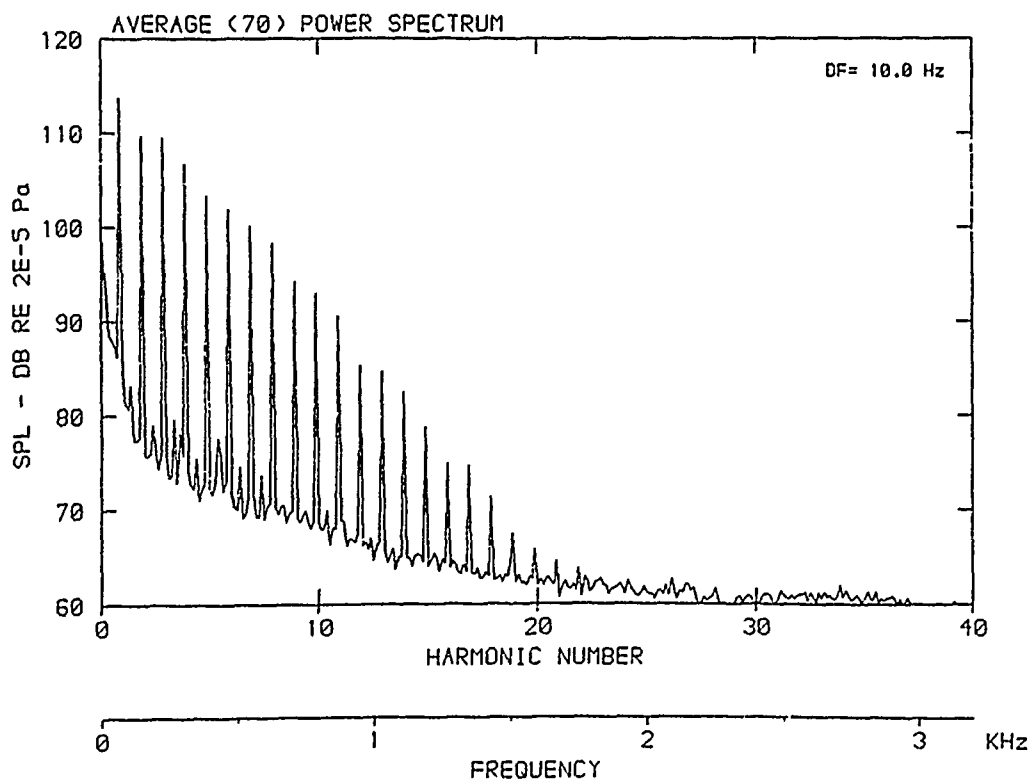
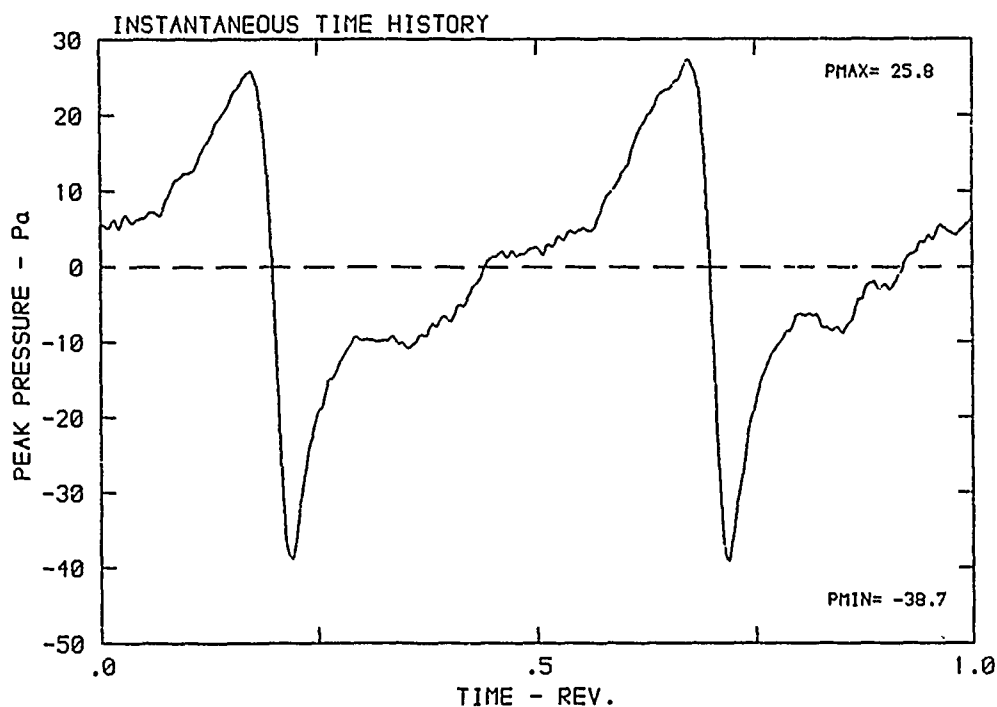
DATA POINT: BN-3      RUN: 56      MP: 3

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



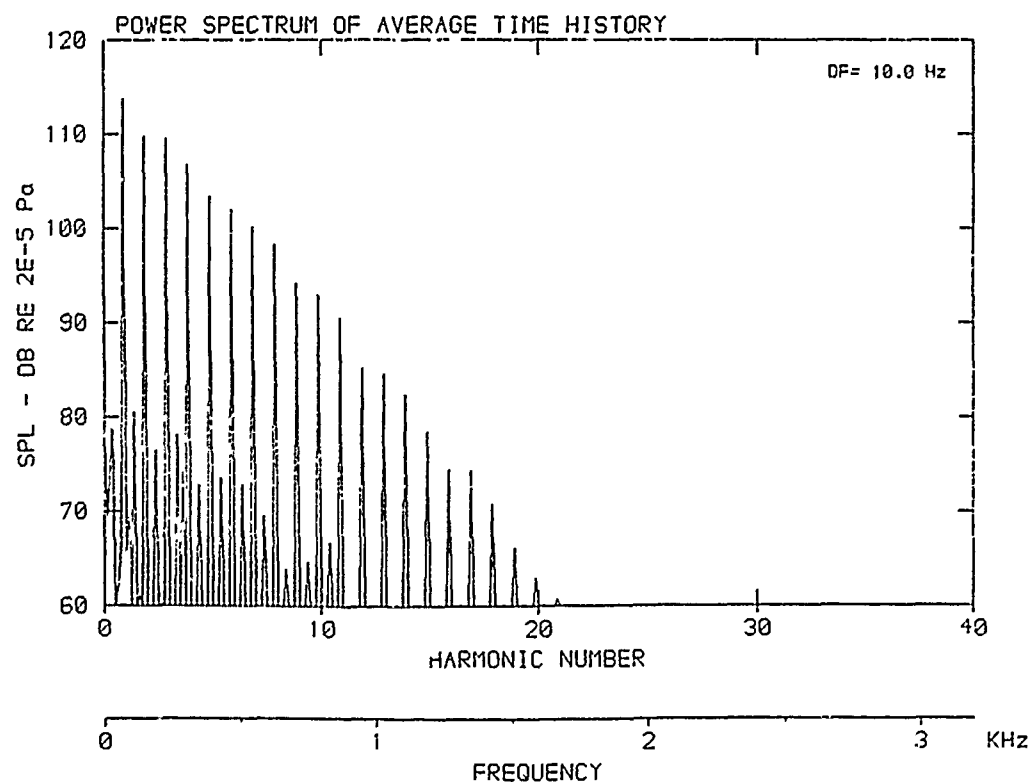
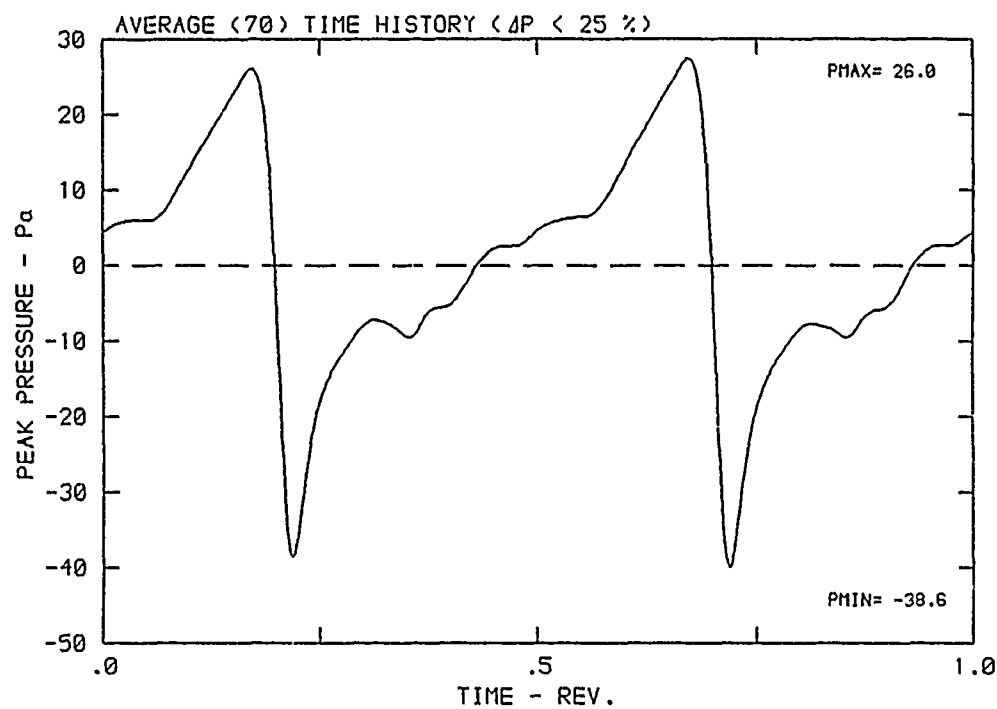
DATA POINT: BN-3    RUN: 56    MP: 4

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



DATA POINT: BN-3    RUN: 56    MP: 4

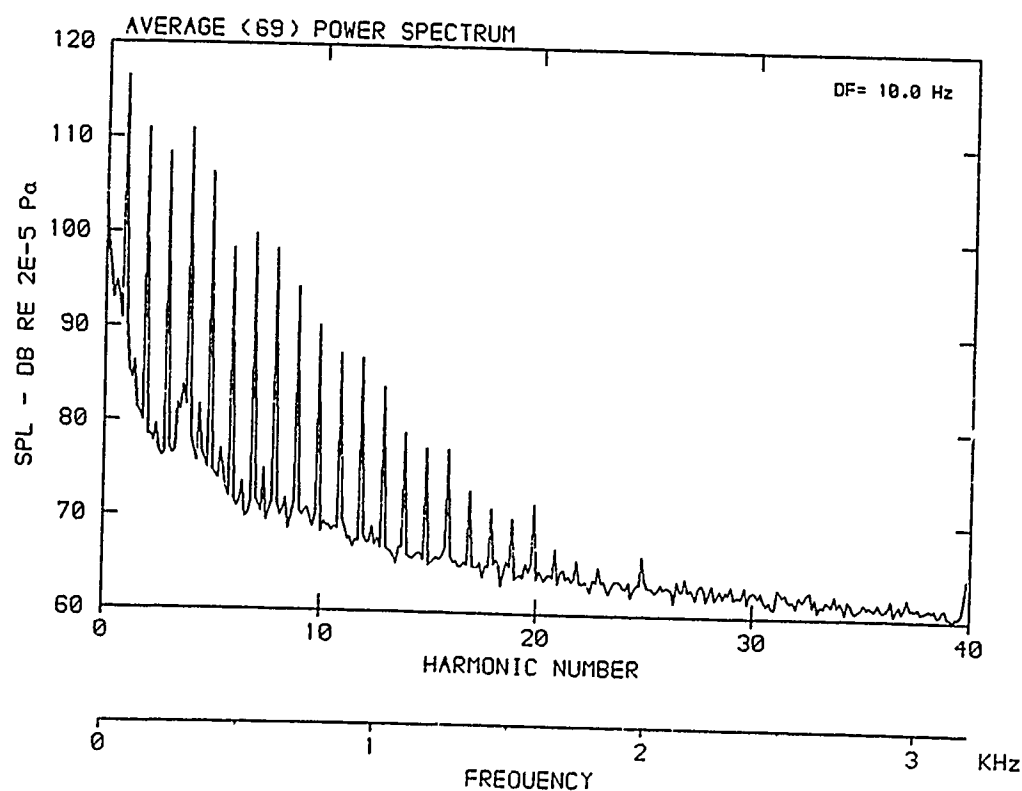
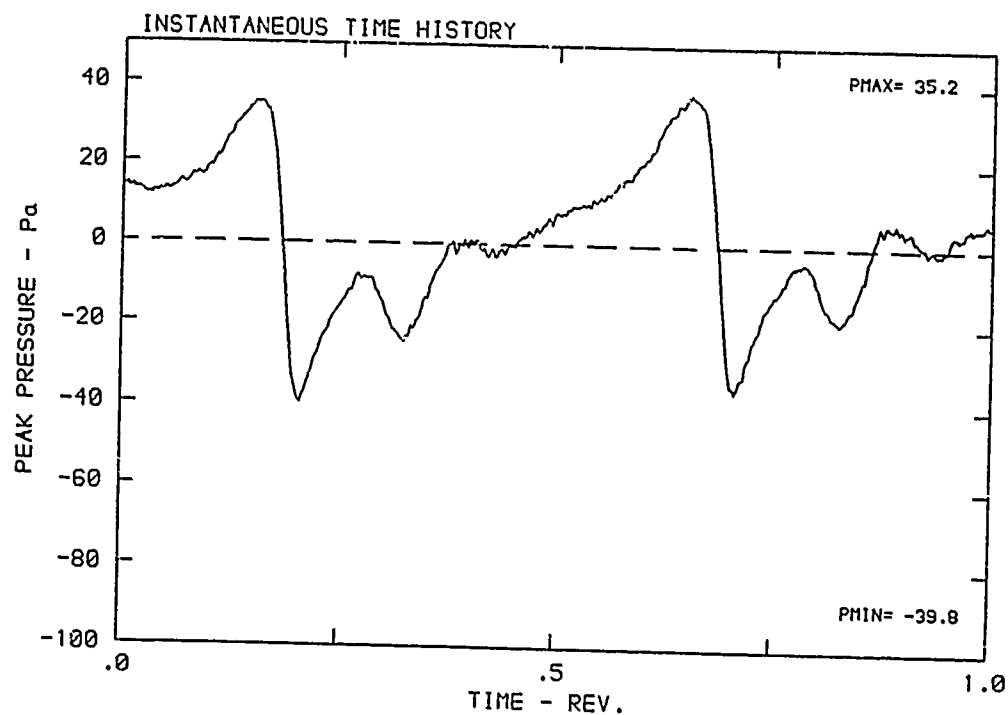
$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K





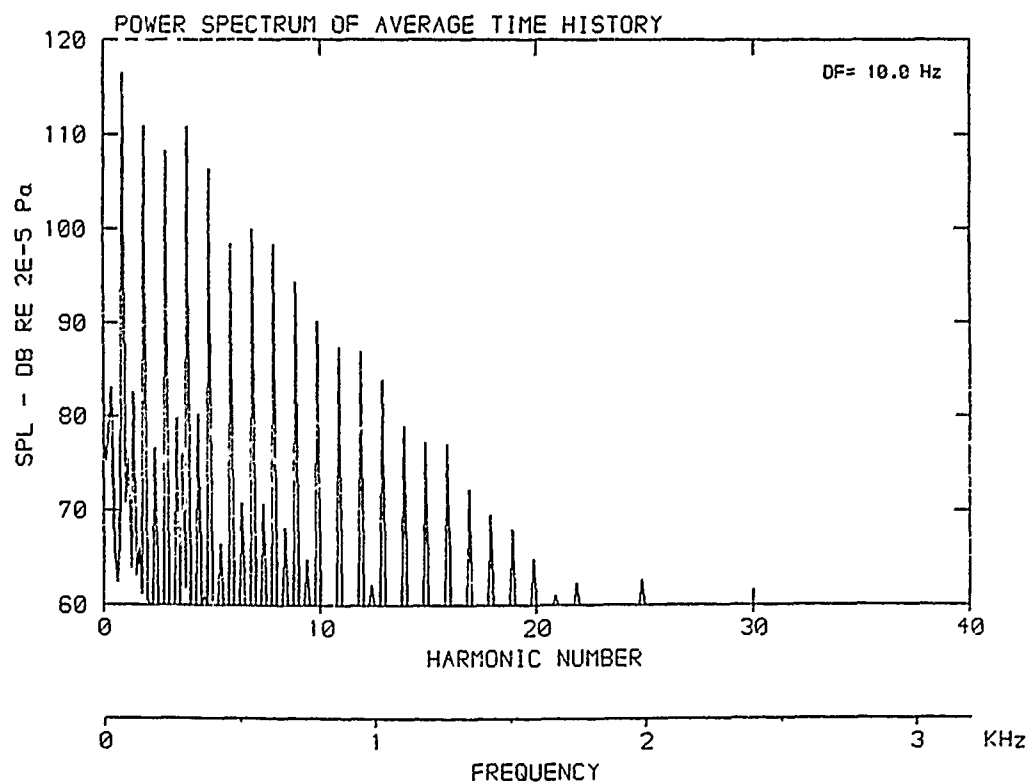
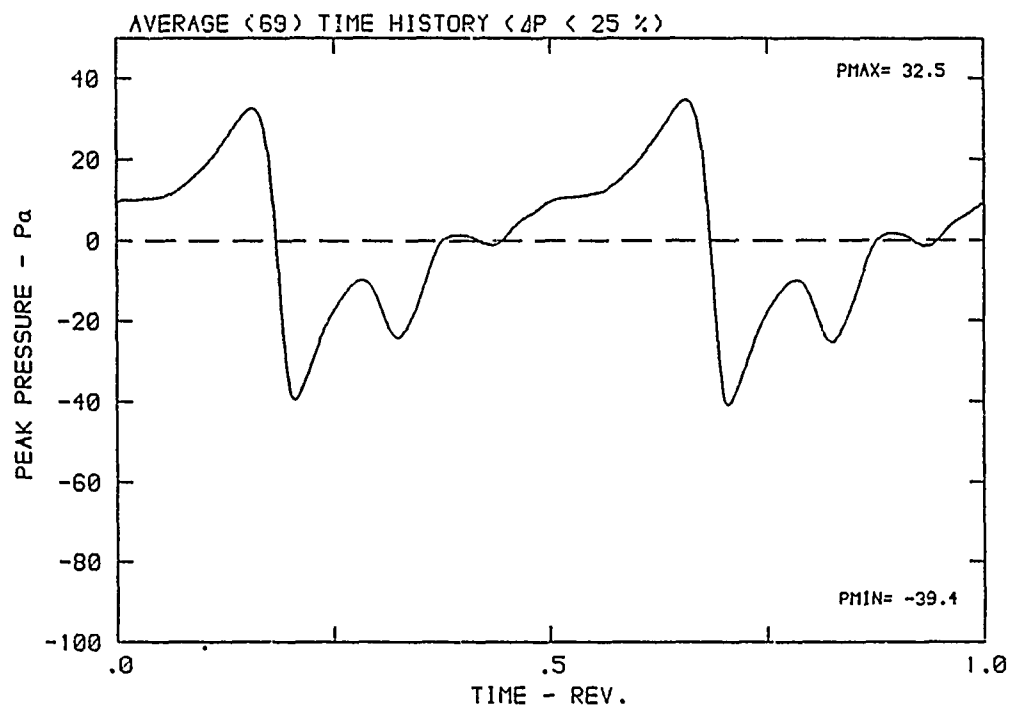
DATA POINT: BN-3 RUN: 56 MP: 5

$\beta$ : 19.9° MH: .7635 n: 2400 rpm v/u: .178  $\phi$ : .0° T: 287.1 K



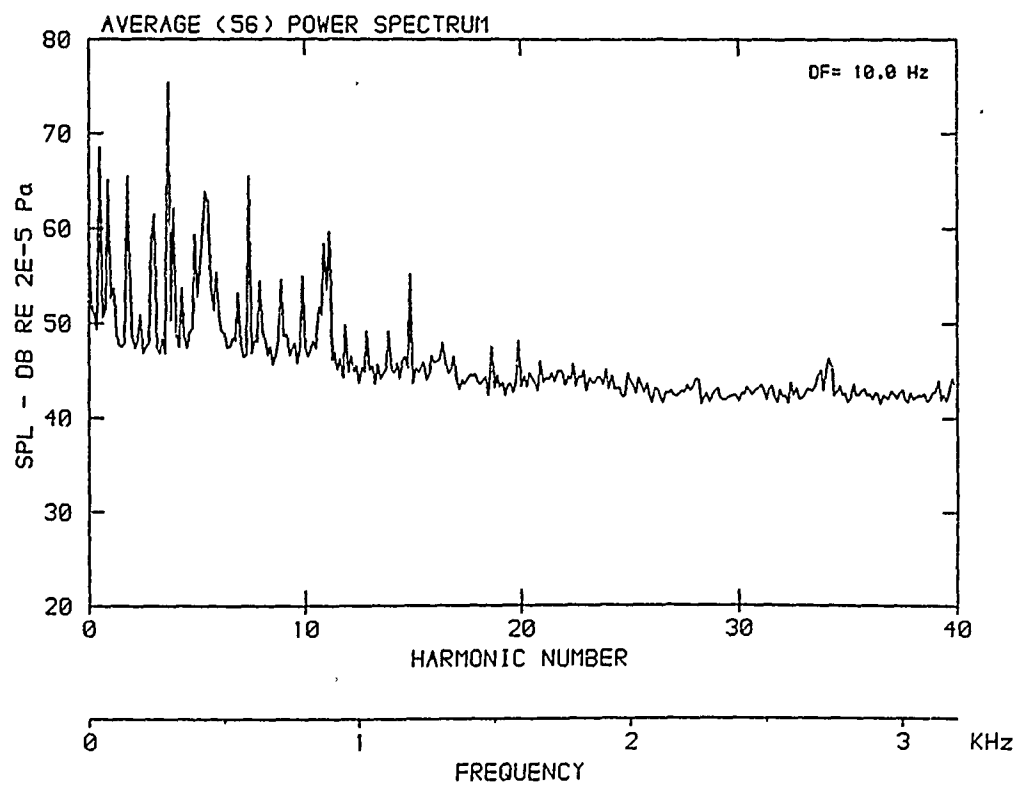
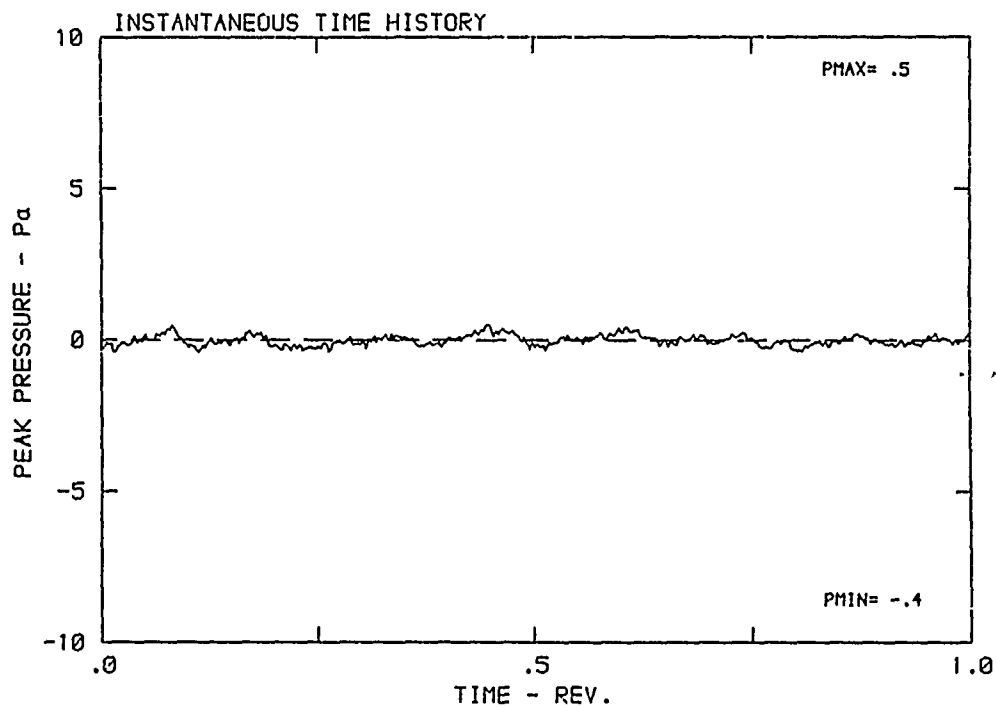
DATA POINT: BN-3 RUN: 56 MP: 5

$\beta$ : 19.9° MH: .7635 n: 2400 rpm v/u: .178  $\phi$ : .0° T: 287.1 K



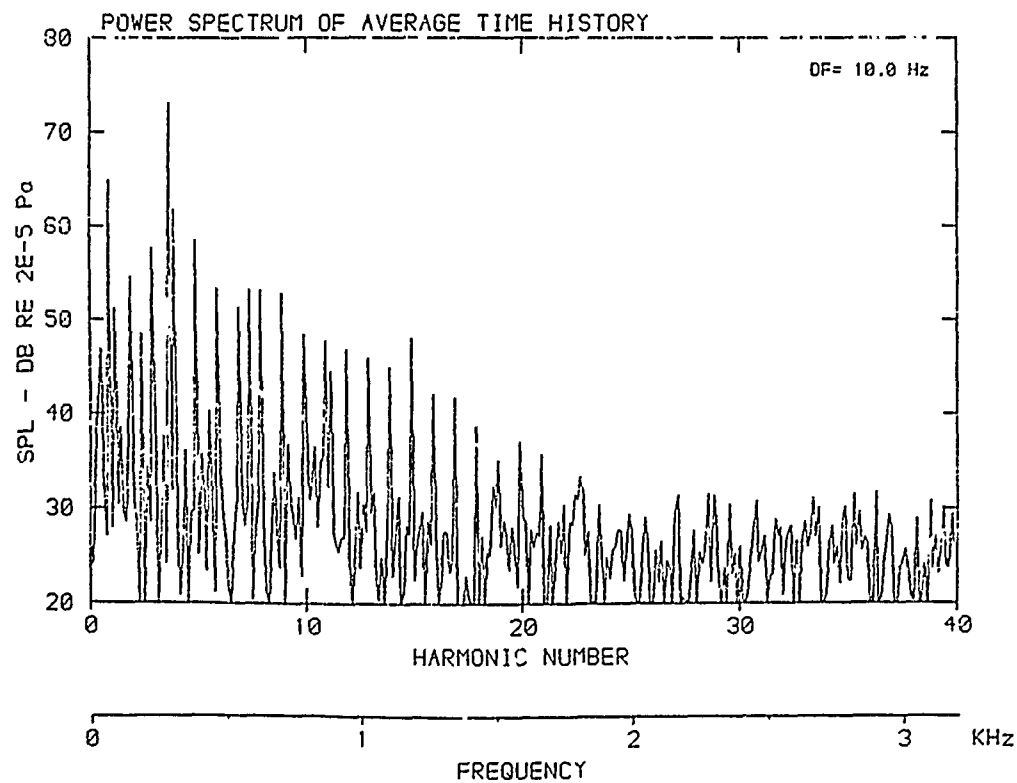
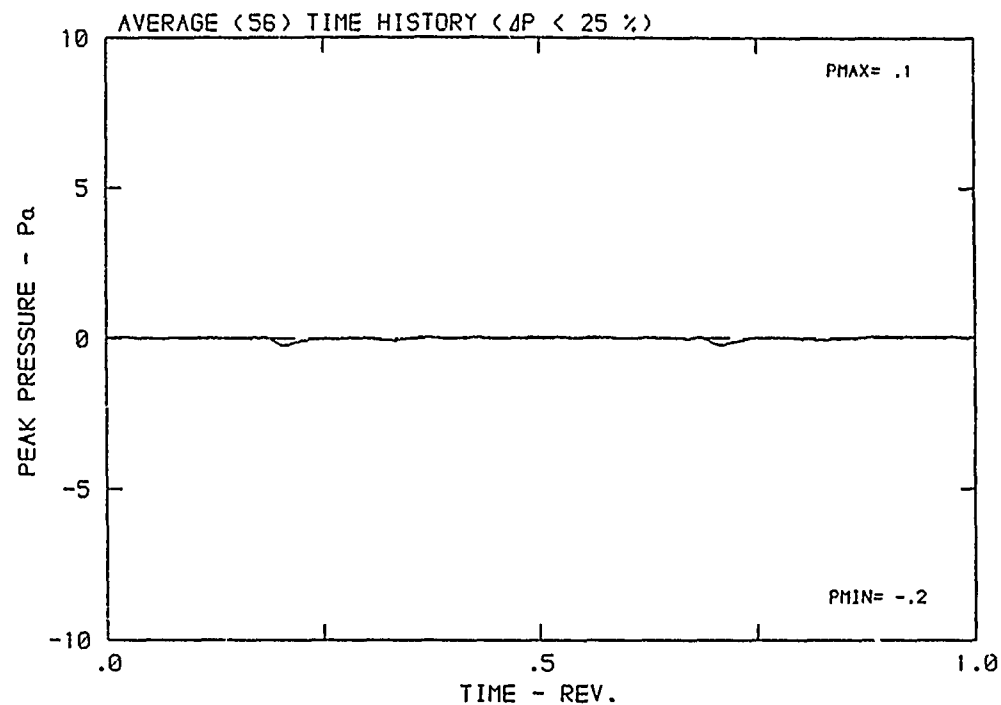
DATA POINT: BN-3    RUN: 56    MP: 6

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



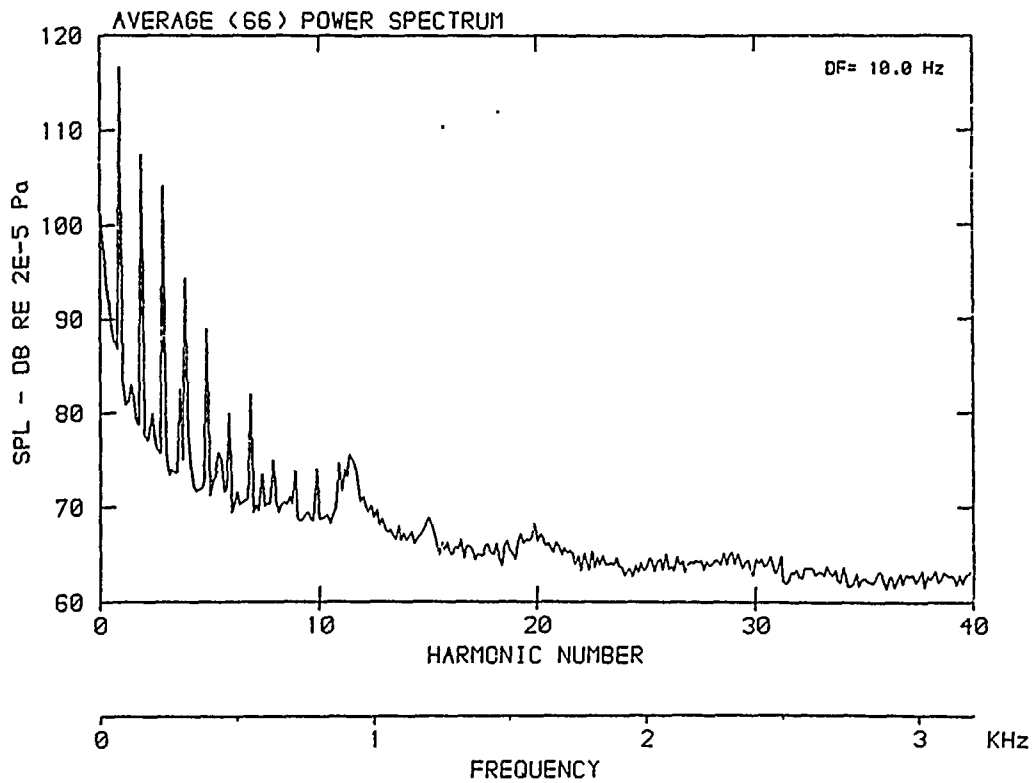
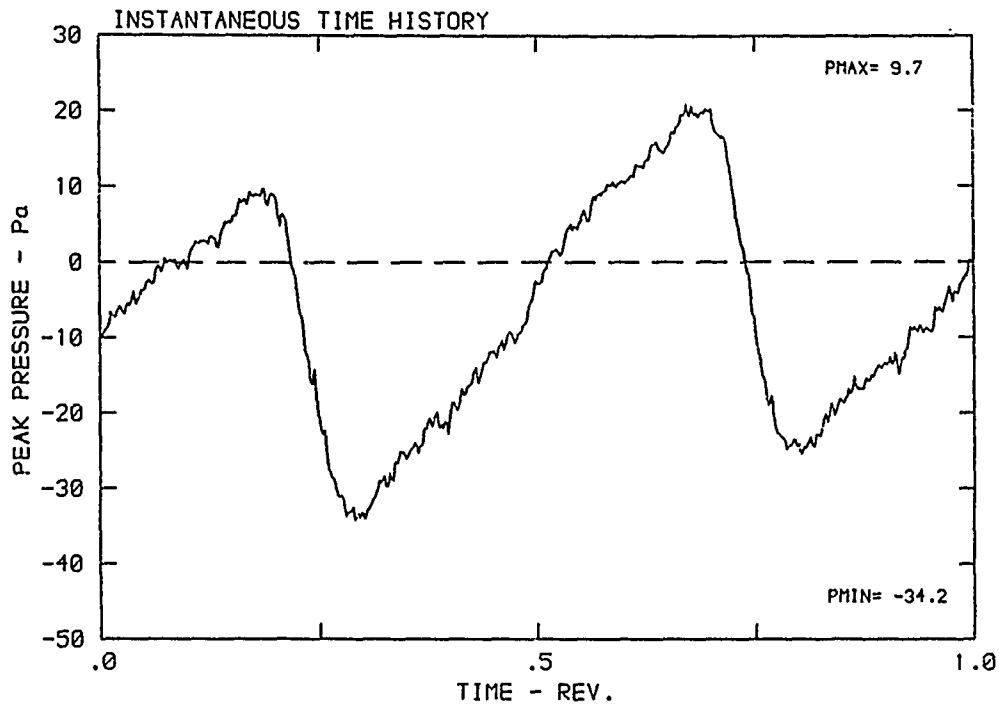
DATA POINT: BN-3      RUN: 56      MP: 6

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



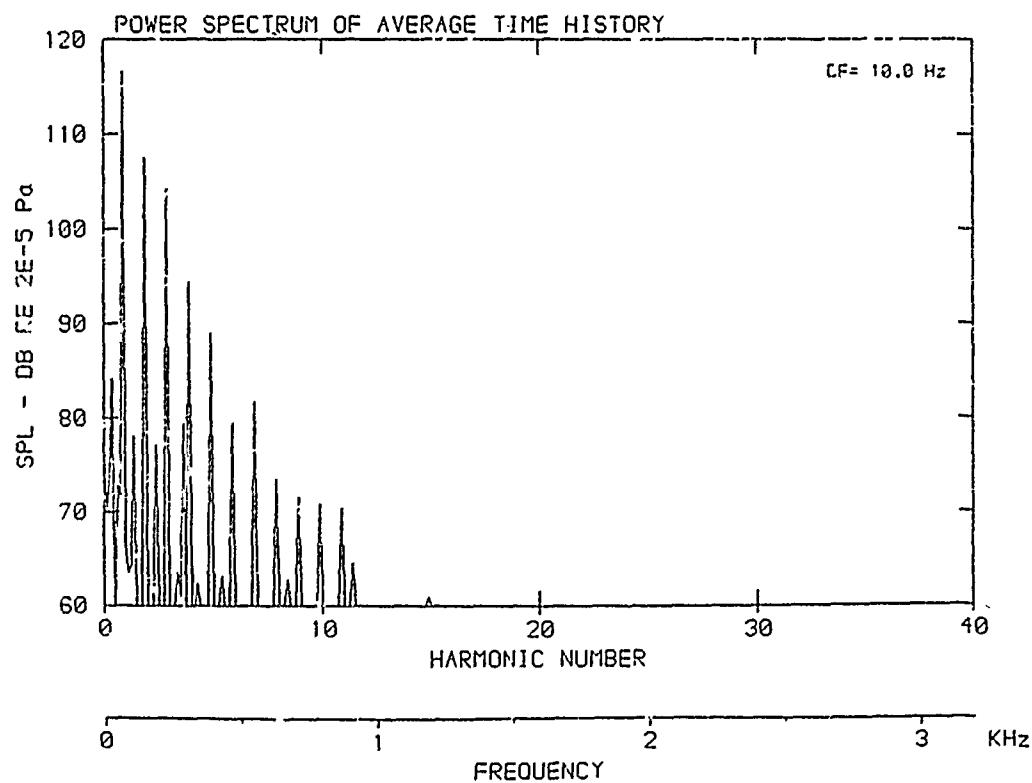
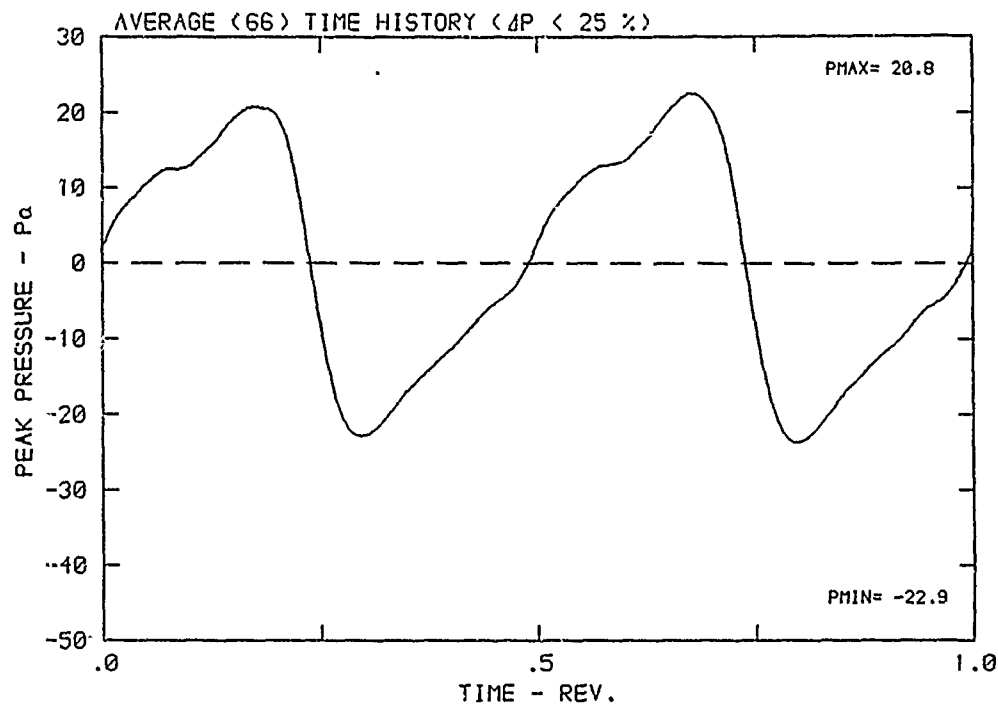
DATA POINT: BN-3      RUN: 56      MP: 7

$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K



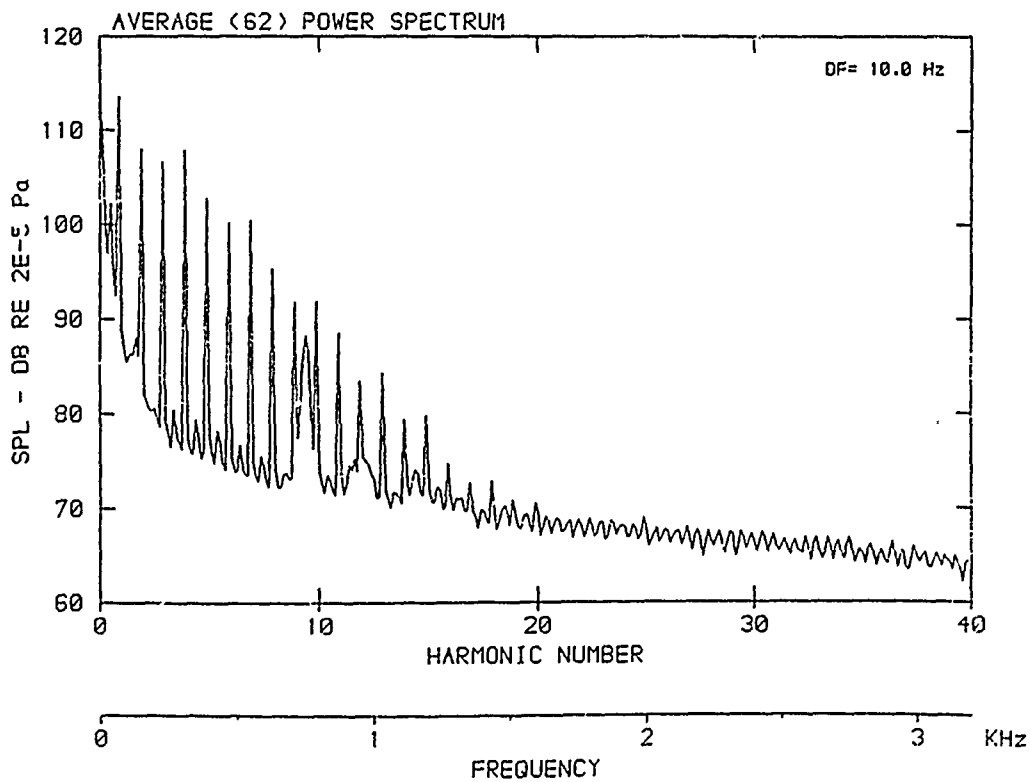
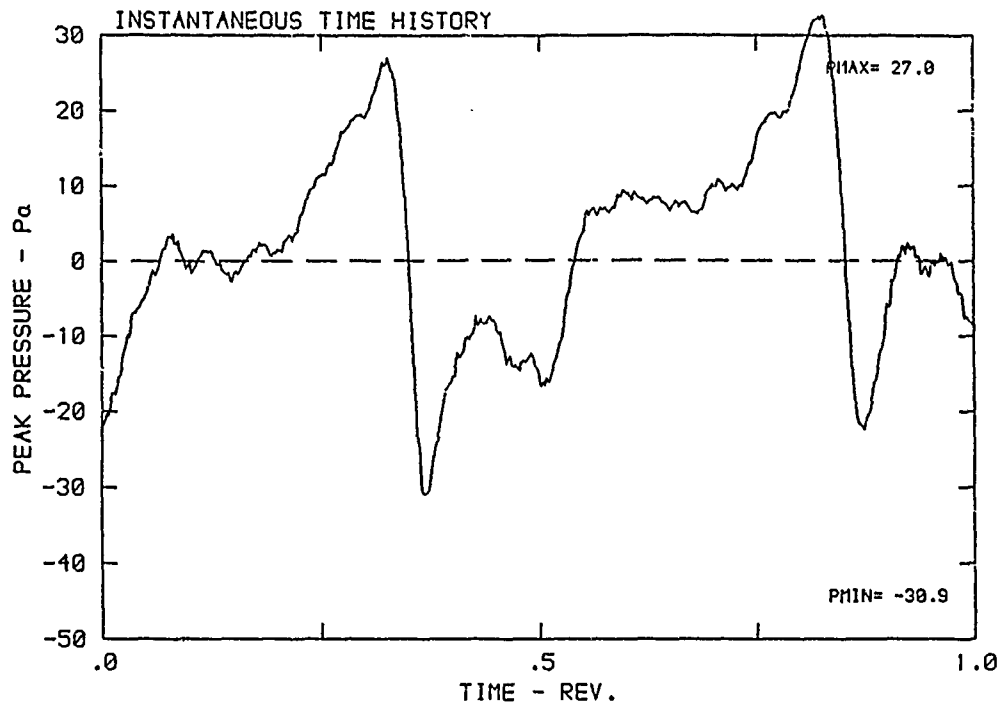
DATA POINT: BN-3 RUN: 56 MP: 7

$\beta$ : 19.9° MH: .7635 n: 2400 rpm v/u: .178  $\phi$ : .0° T: 287.1 K



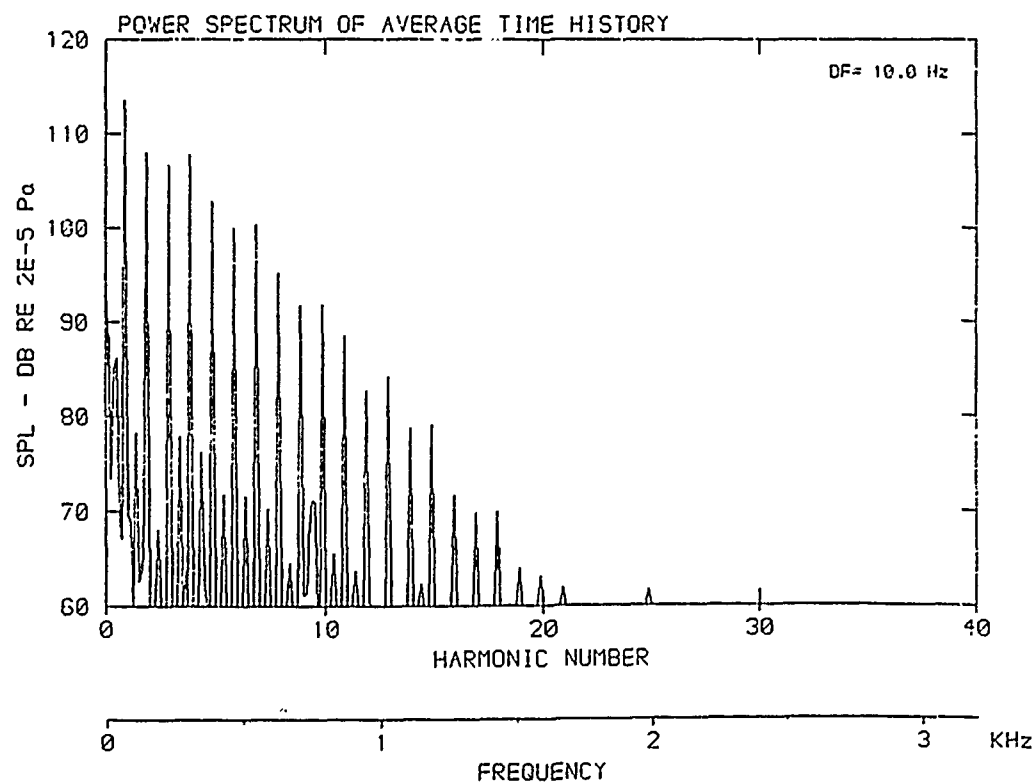
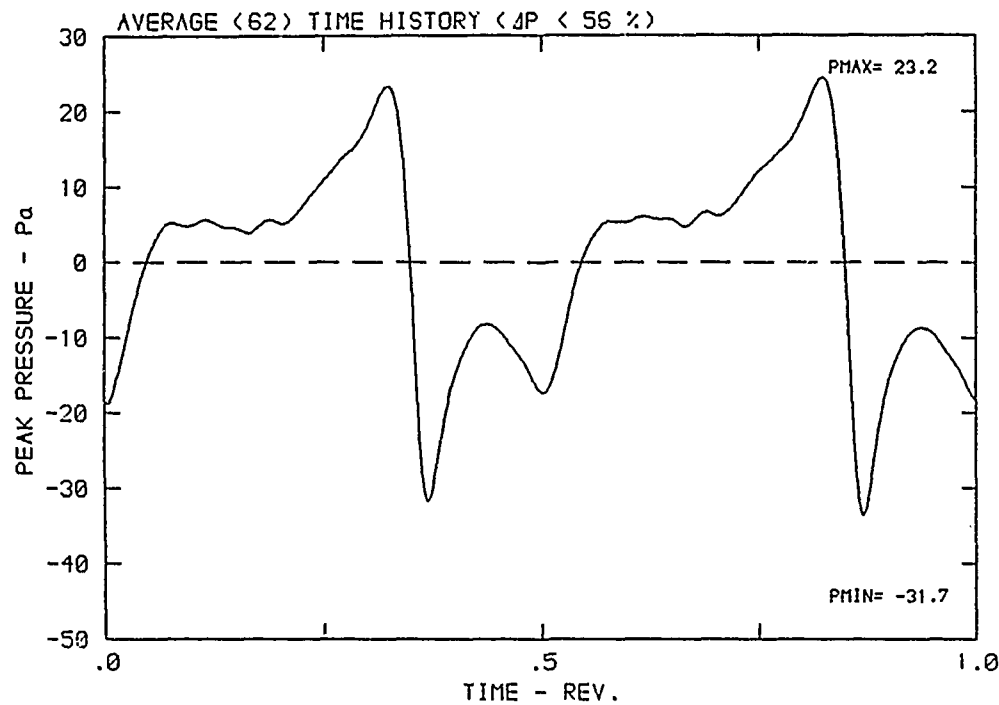
DATA POINT: BN-3 RUN: 56 MP: 9

$\beta$ : 19.9° MH: .7635 n: 2400 rpm v/u: .178  $\phi$ : .0° T: 287.1 K



DATA POINT: BN-3    RUN: 56    MP: 9

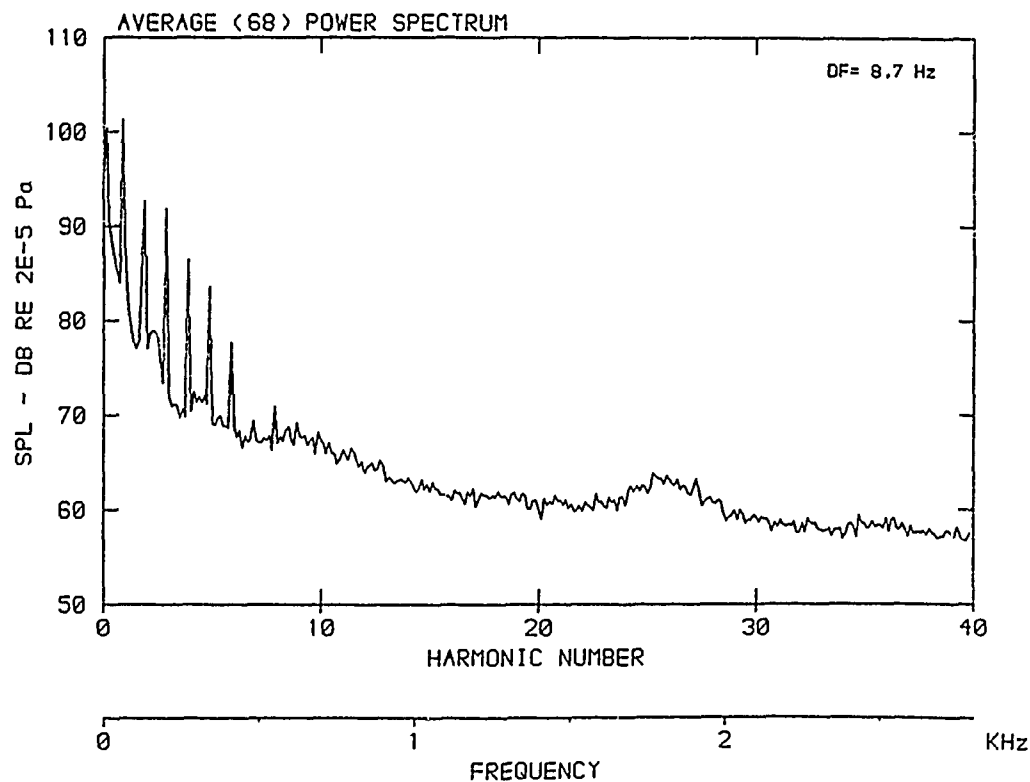
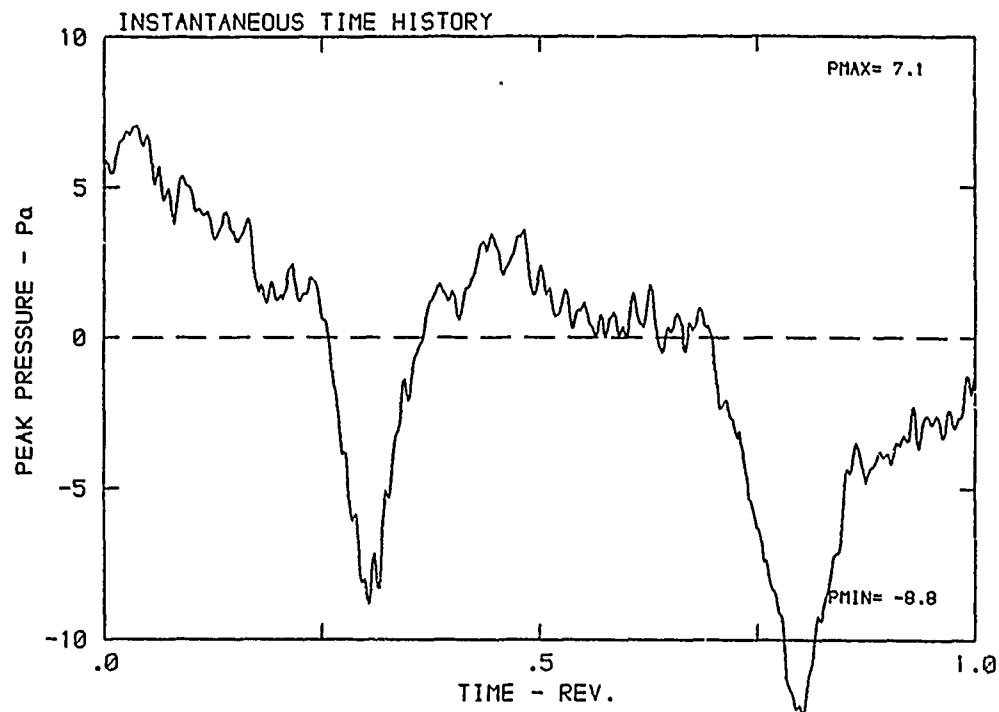
$\beta$ : 19.9°    MH: .7635    n: 2400 rpm    v/u: .178     $\phi$ : .0°    T: 287.1 K





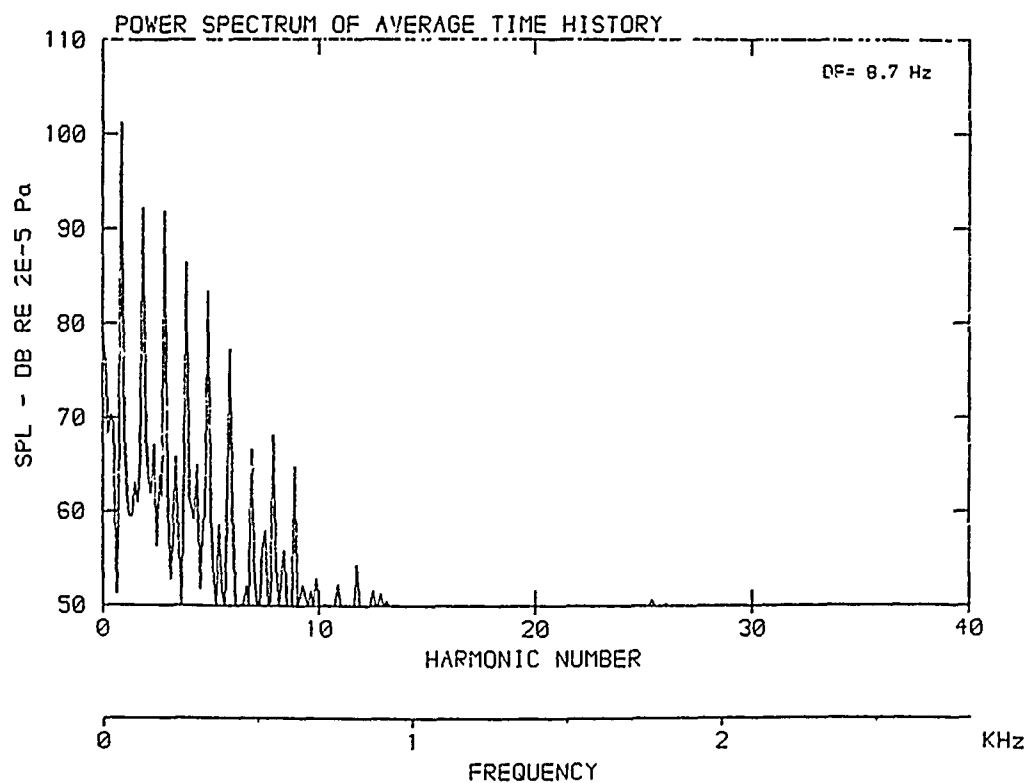
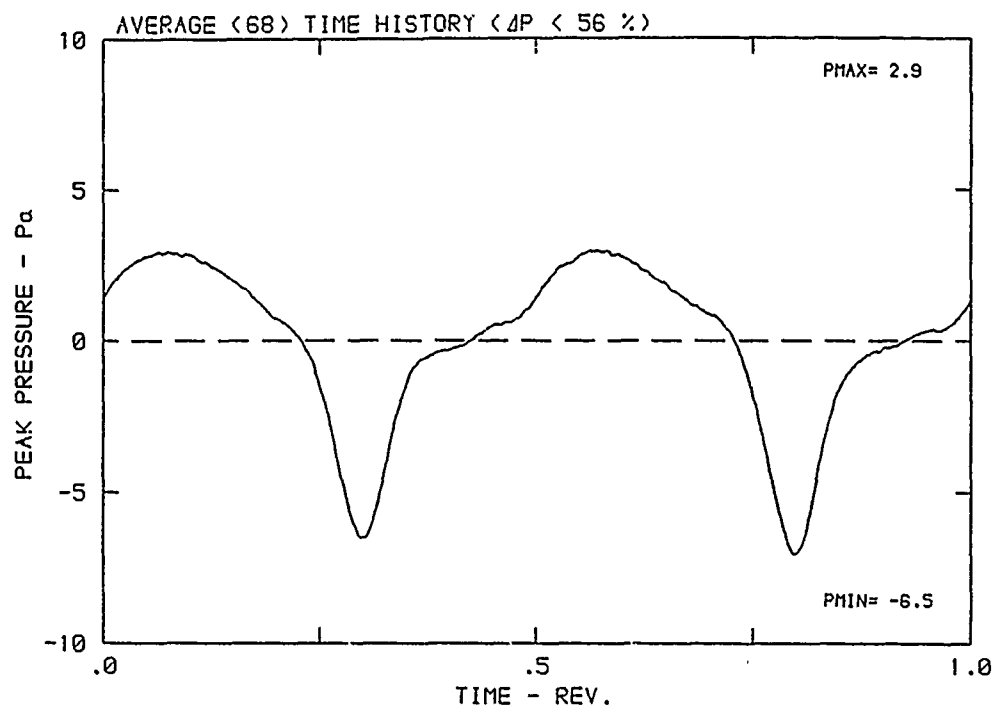
DATA POINT: BN-4 RUN: 54 MP: 1

$\beta$ : 19.9° MH: .6729 n: 2100 rpm  $v/u$ : .229  $\phi$ : .0° T: 288.7 K



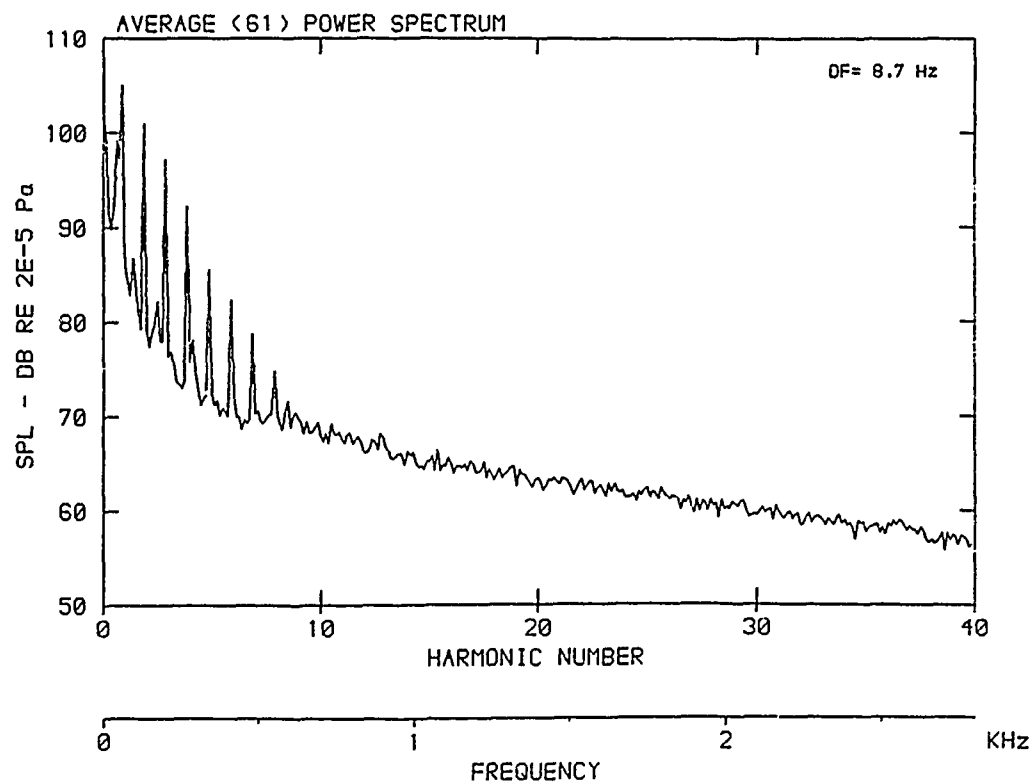
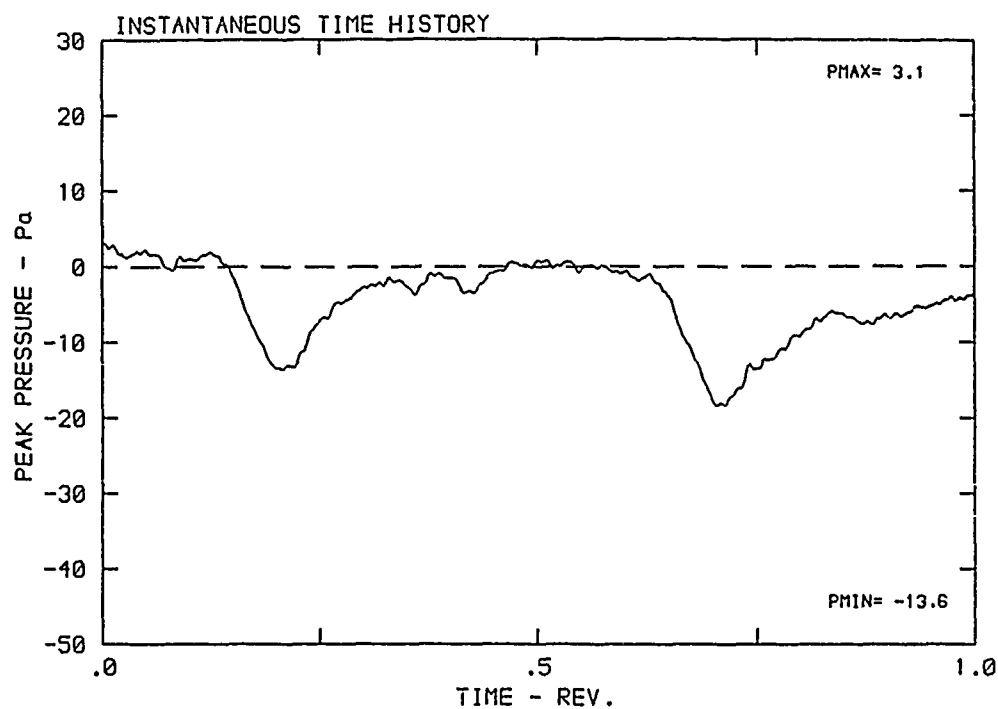
DATA POINT: BN-4    RUN: 54    MP: 1

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



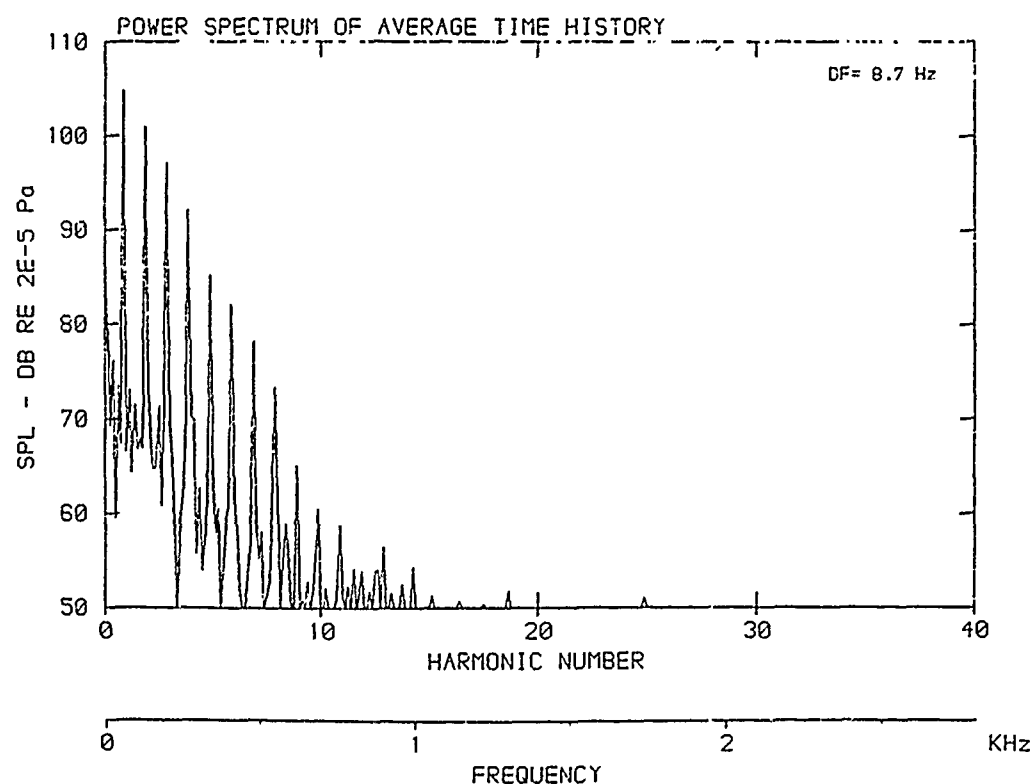
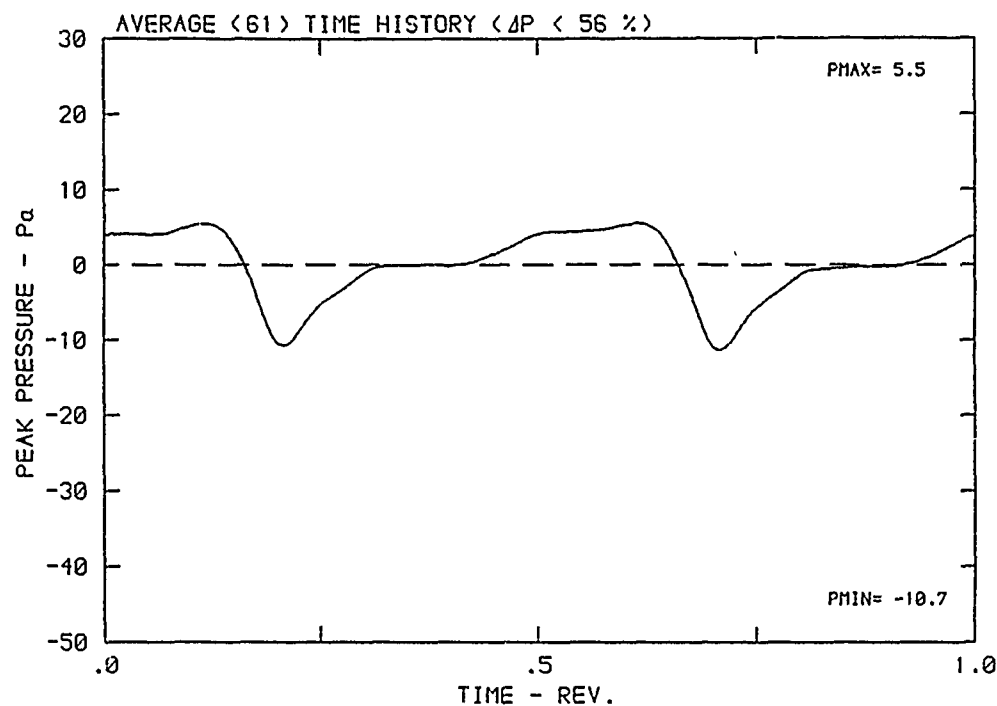
DATA POINT: BN-4    RUN: 54    MP: 2

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



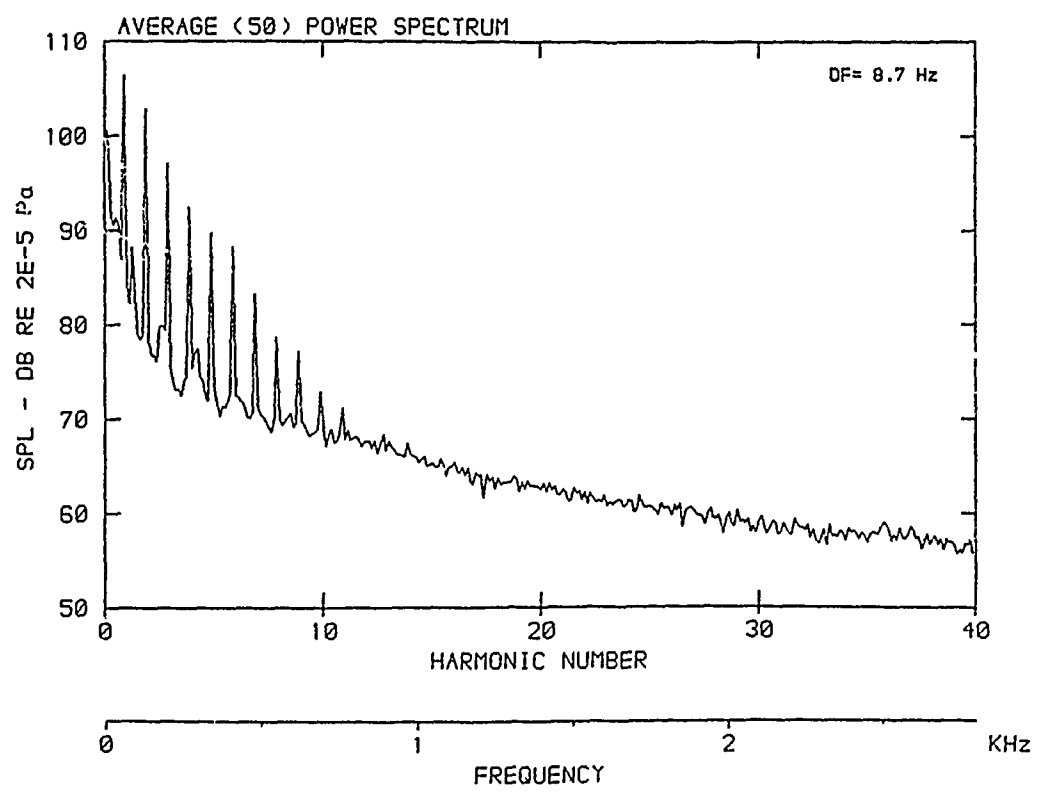
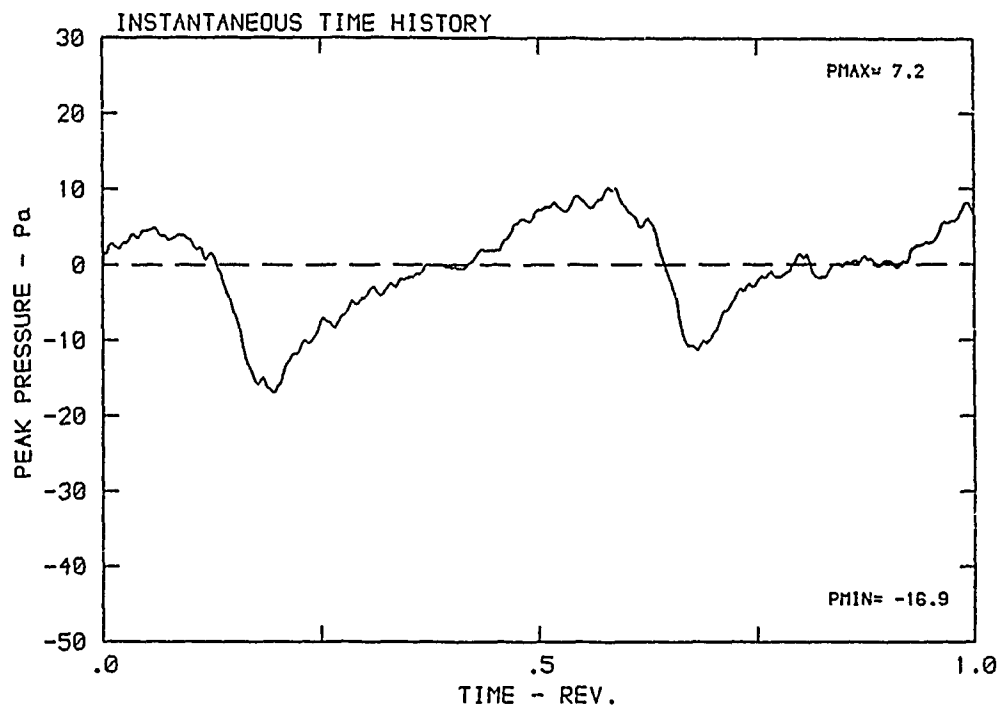
DATA POINT: BN-4    RUN: 54    MP: 2

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



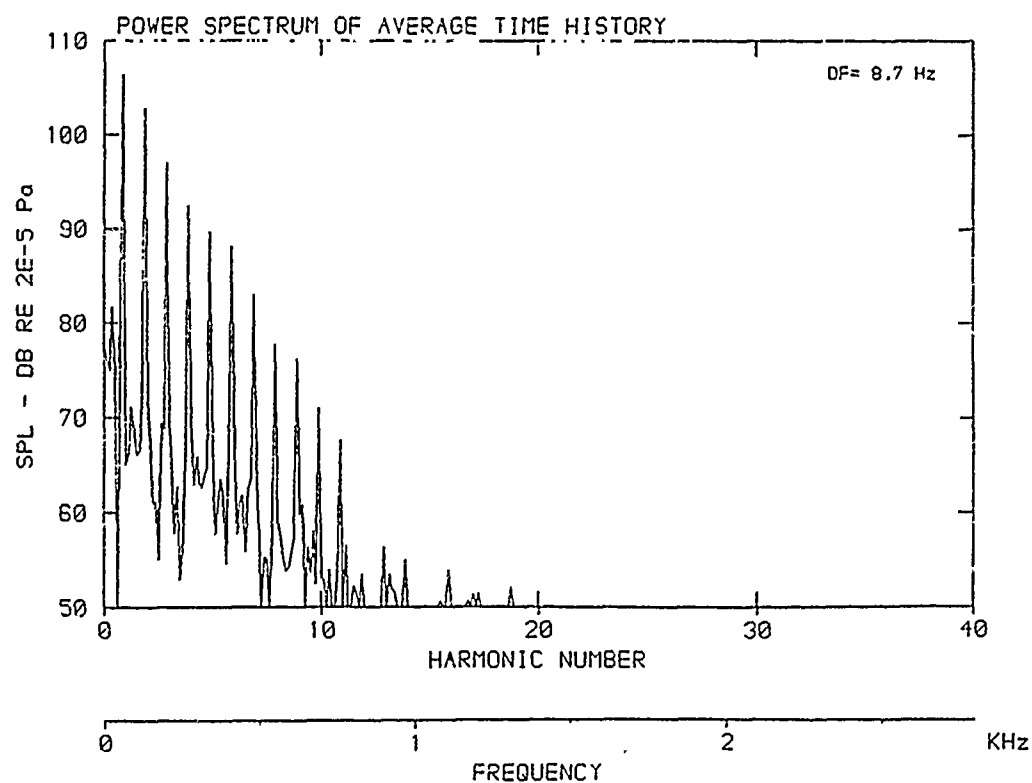
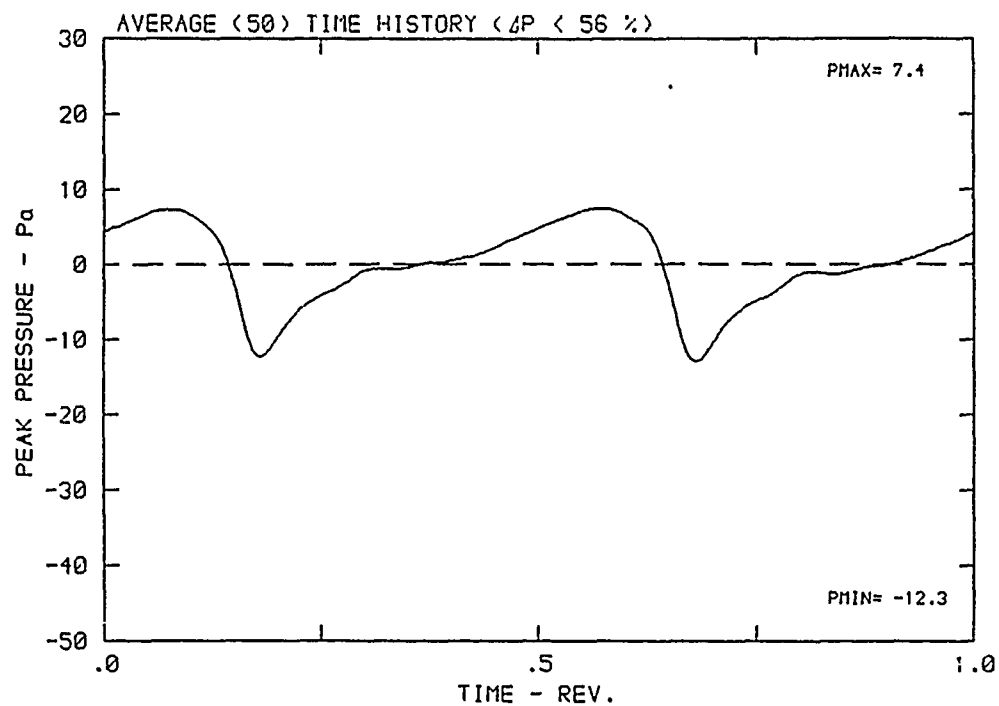
DATA POINT: BN-4    RUN: 54    MP: 3

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 268.7 K



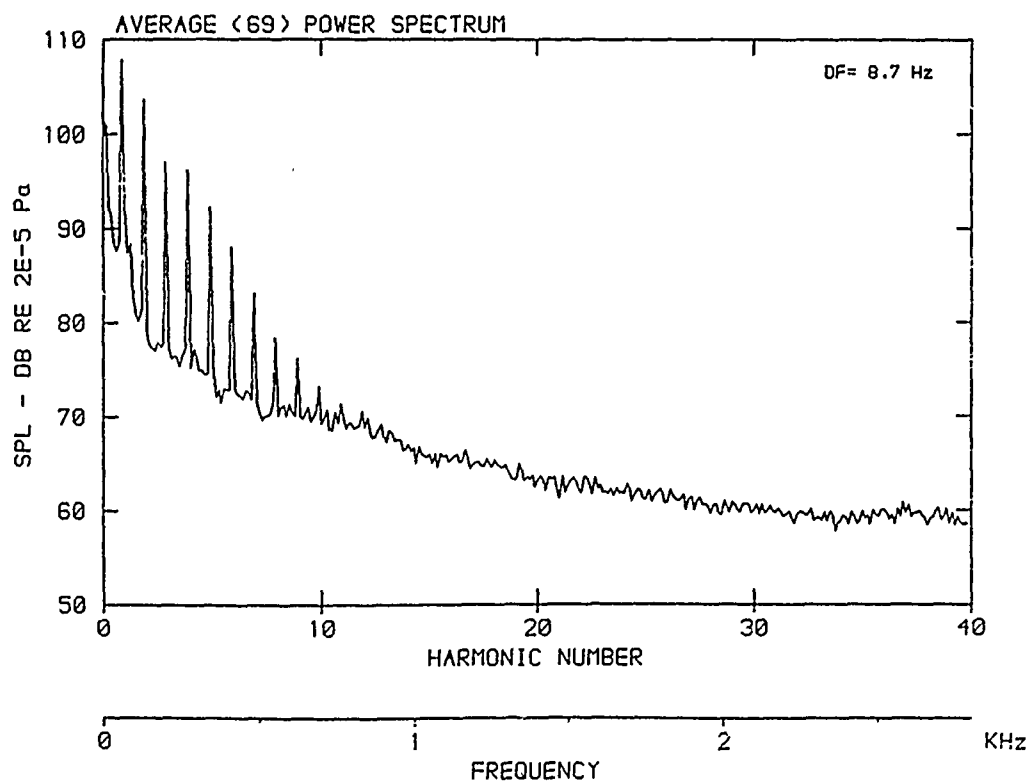
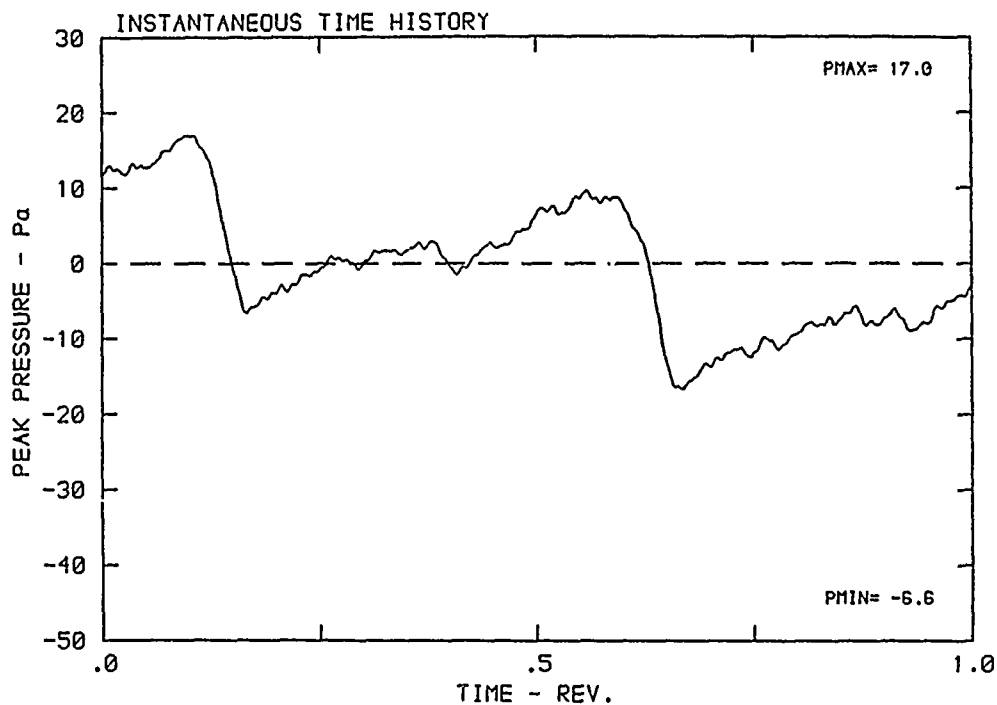
DATA POINT: BN-4    RUN: 54    MP: 3

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm     $v/u$ : .229     $\phi$ : .0°    T: 288.7 K



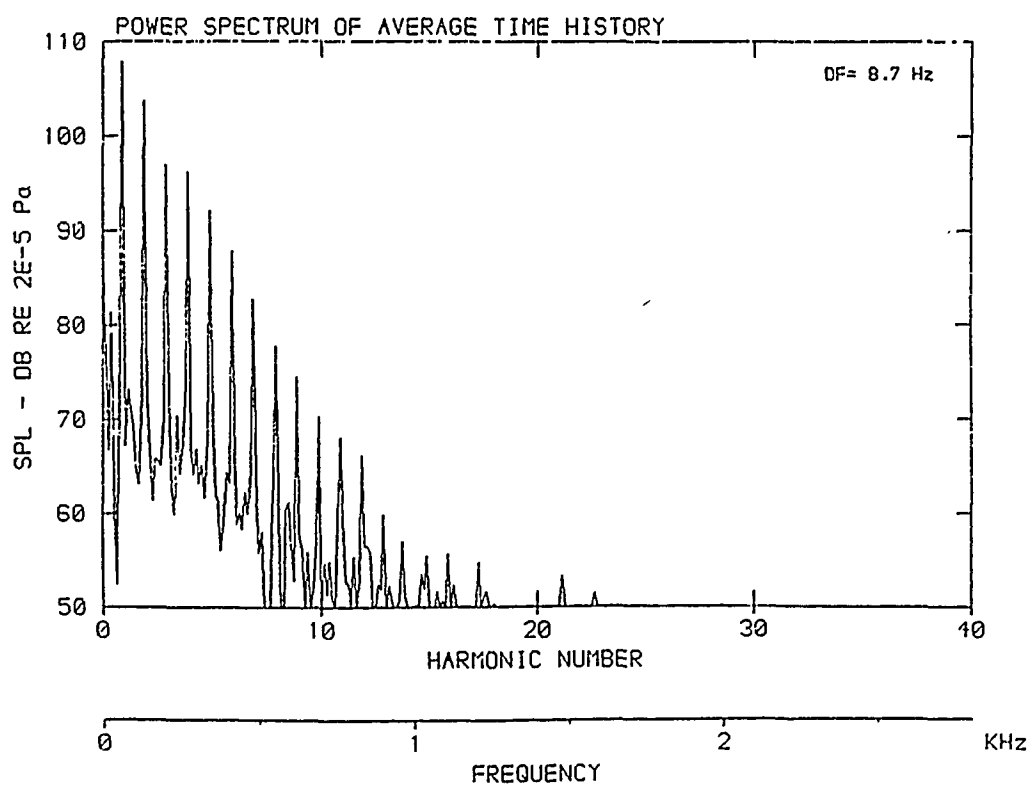
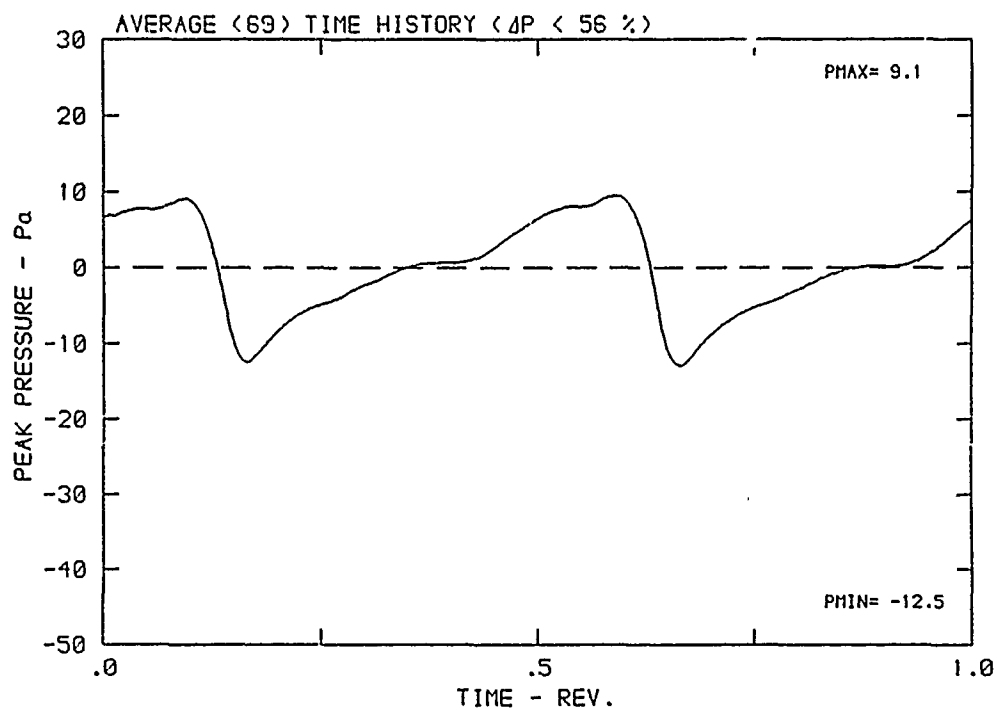
DATA POINT: BN-4    RUN: 54    MP: 4

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



DATA POINT: BN-4      RUN: 54      MP: 4

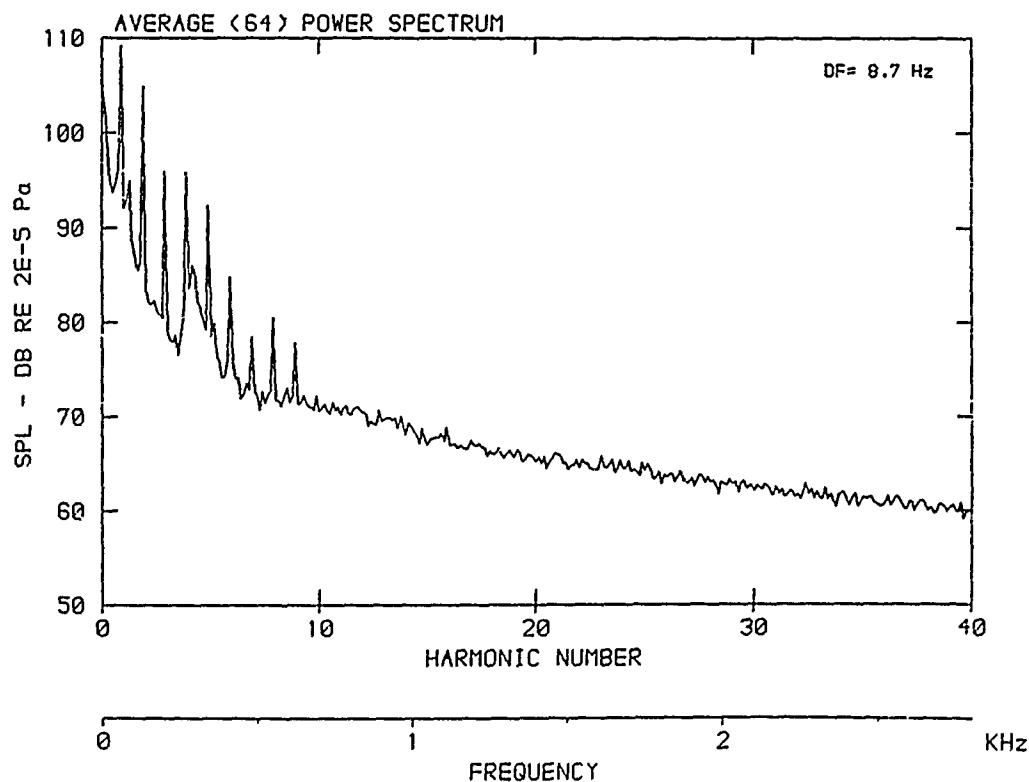
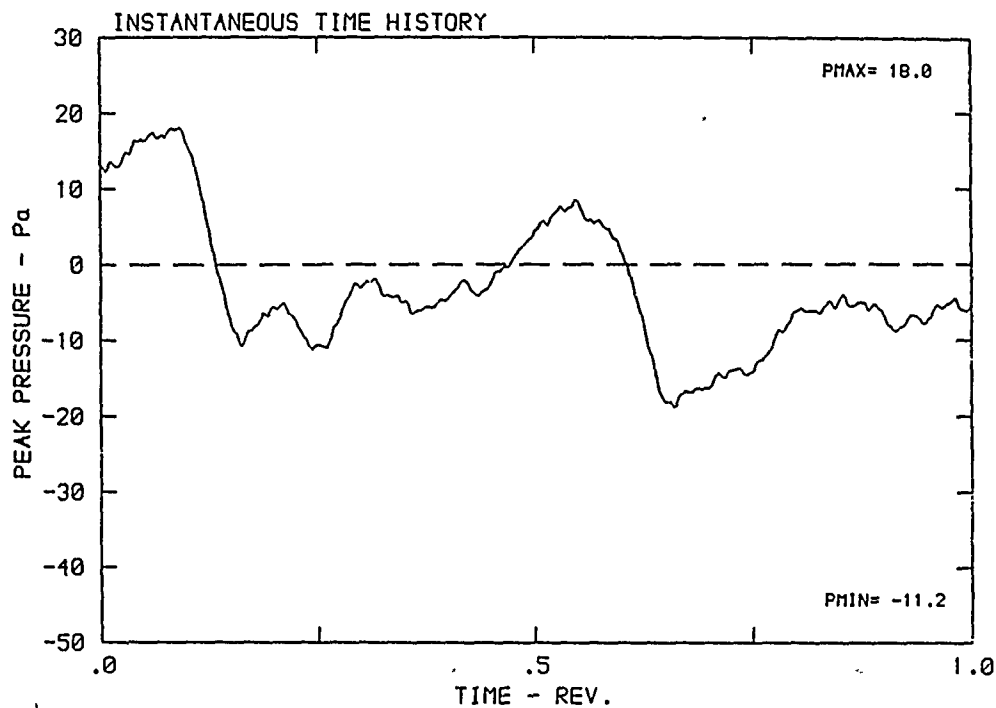
$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K





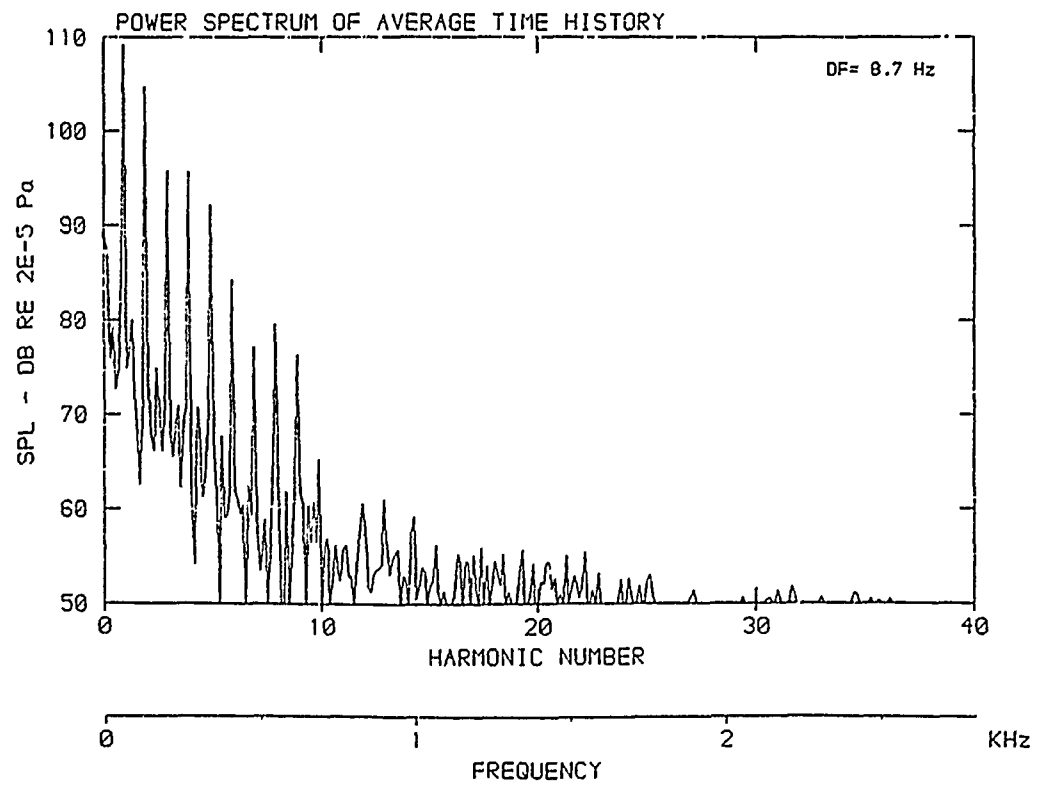
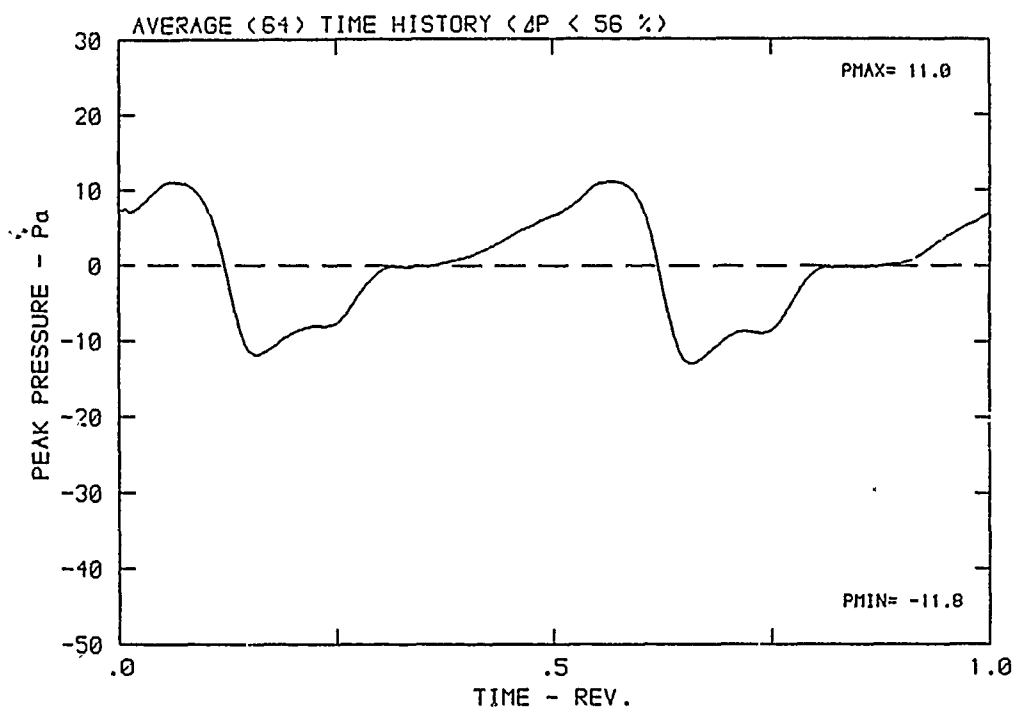
DATA POINT: BN-4      RUN: 54      MP: 5

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



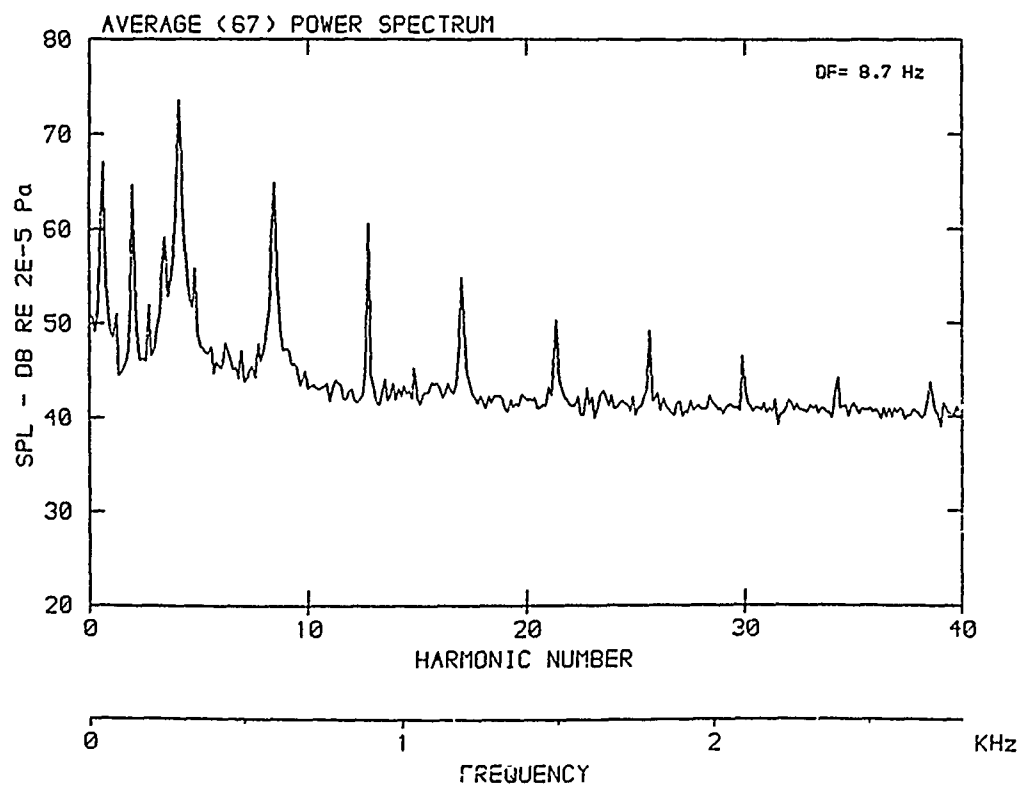
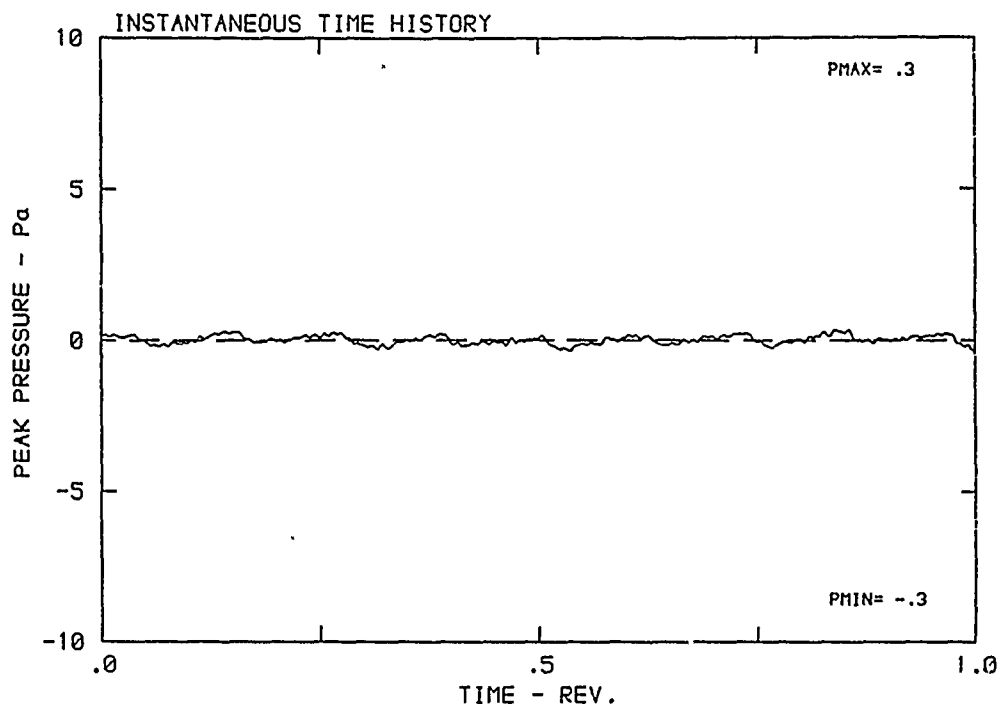
DATA POINT: BN-4    RUN: 54    MP: 5

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



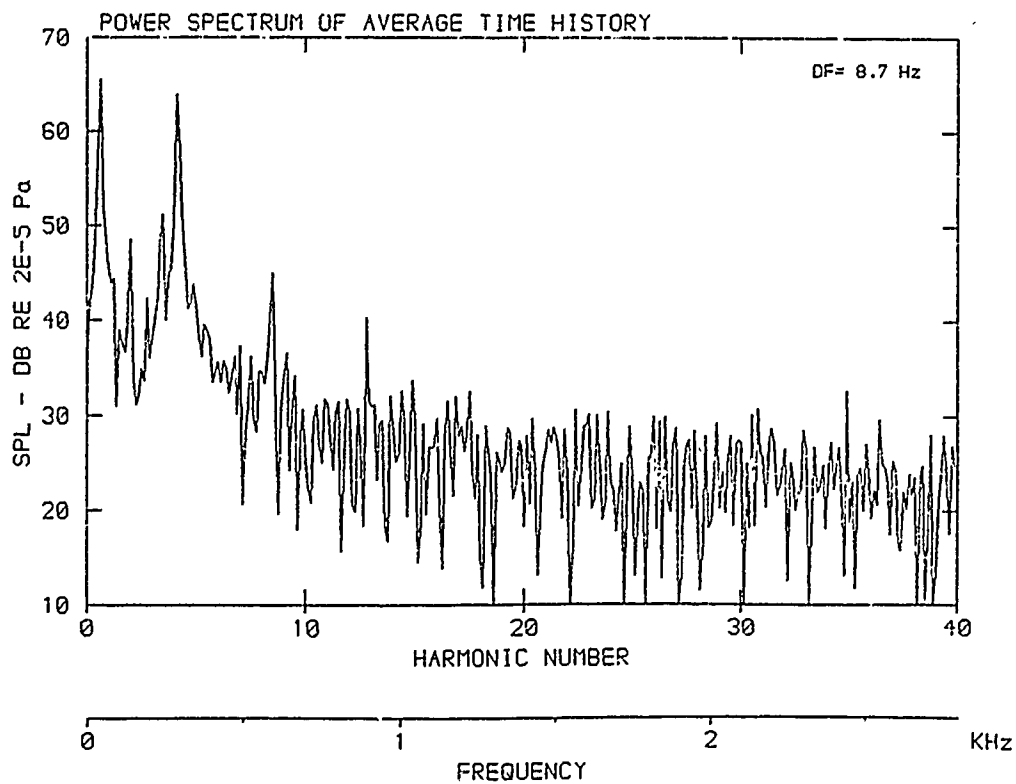
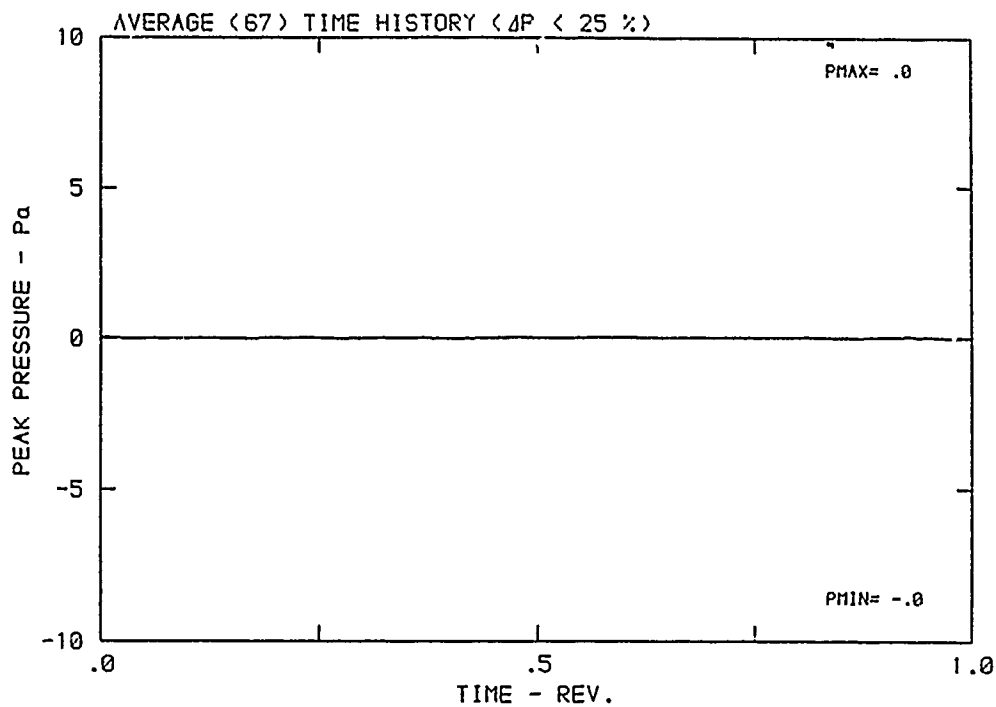
DATA POINT: BN-4    RUN: 54    MP: 6

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



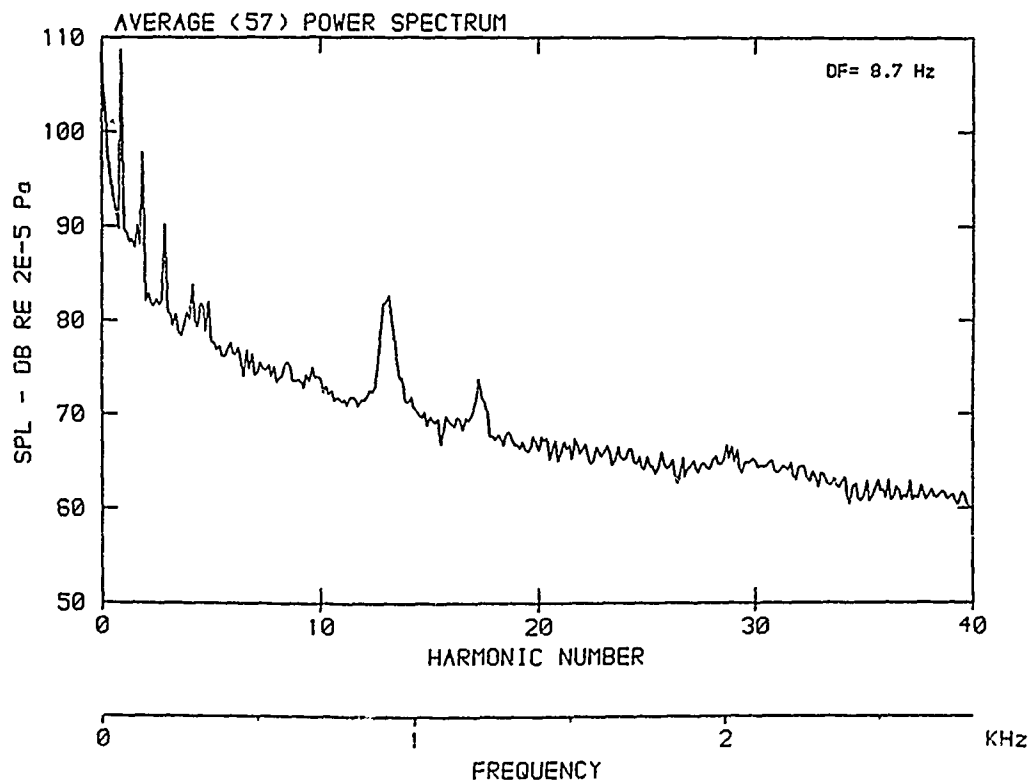
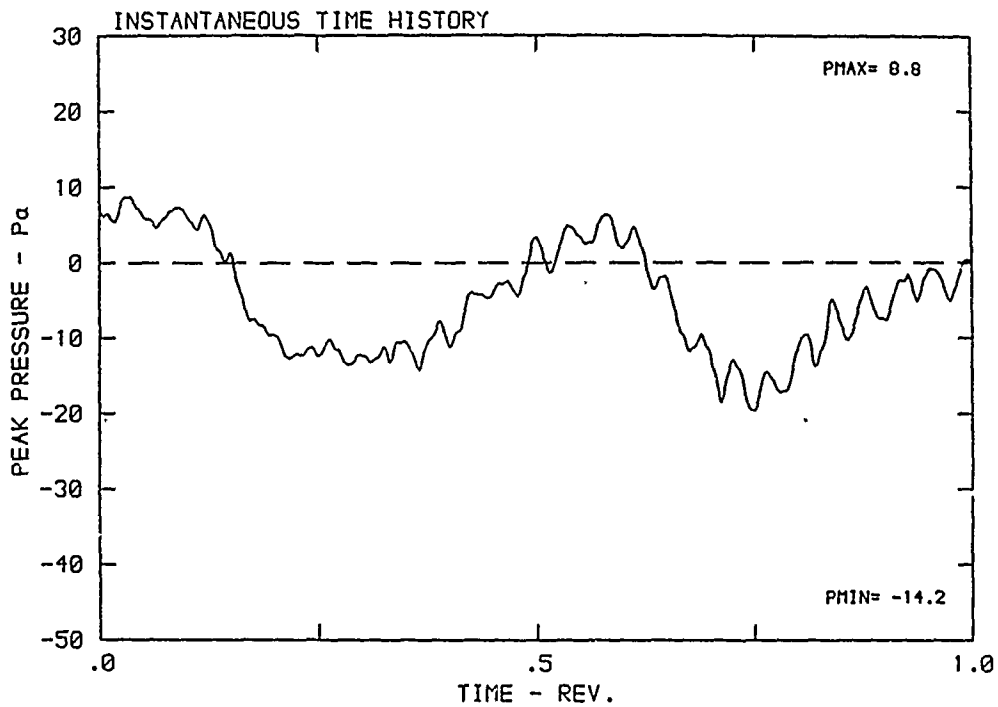
DATA POINT: BN-4      RUN: 54      MP: 6

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



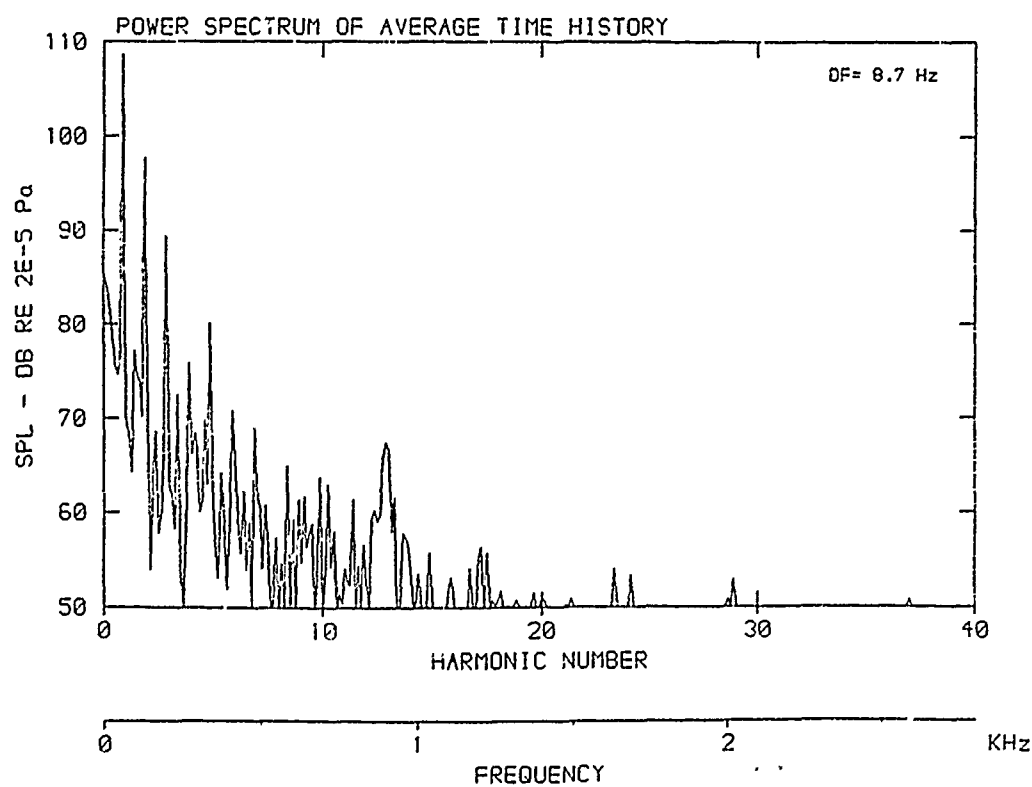
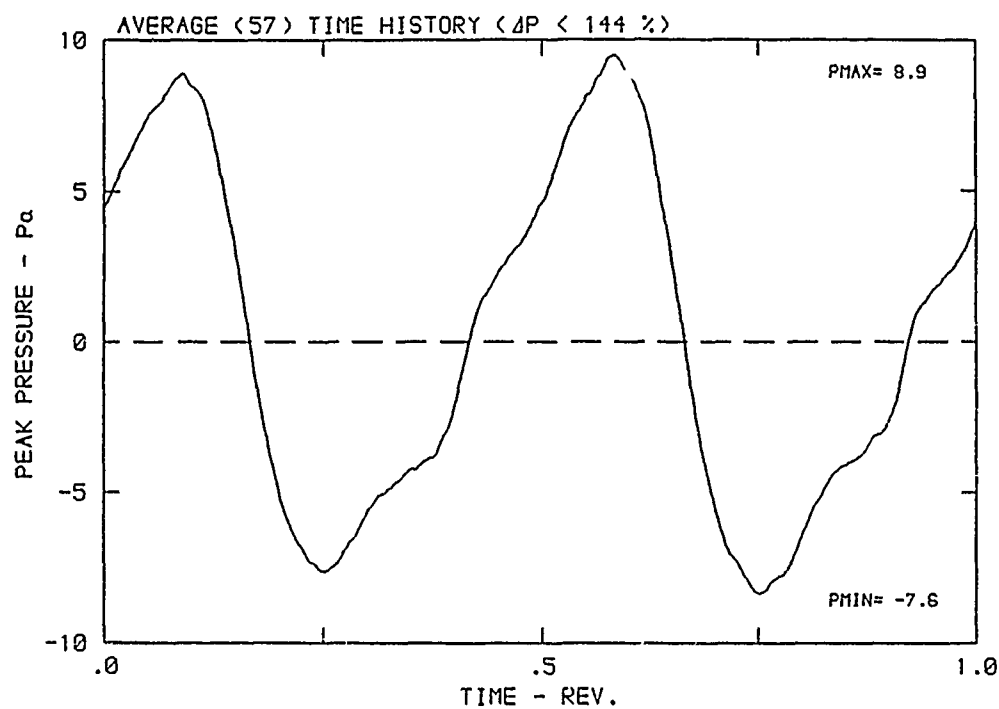
DATA POINT: BN-4 RUN: 54 MP: 7

$\beta$ : 19.9° MH: .6729 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 288.7 K



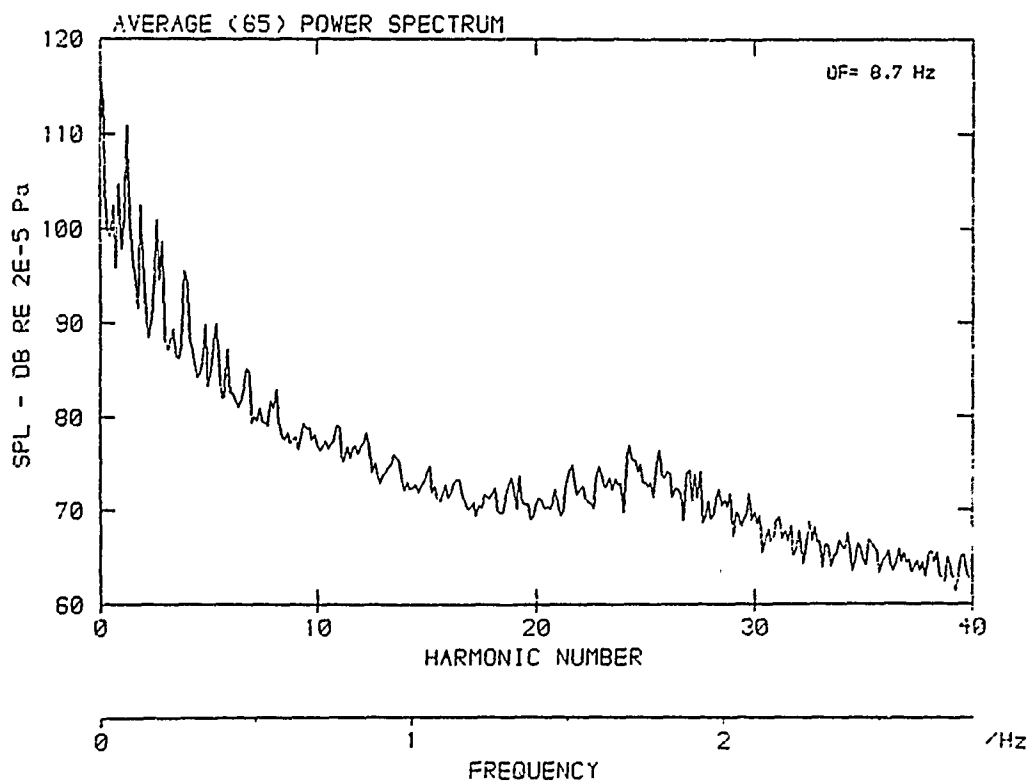
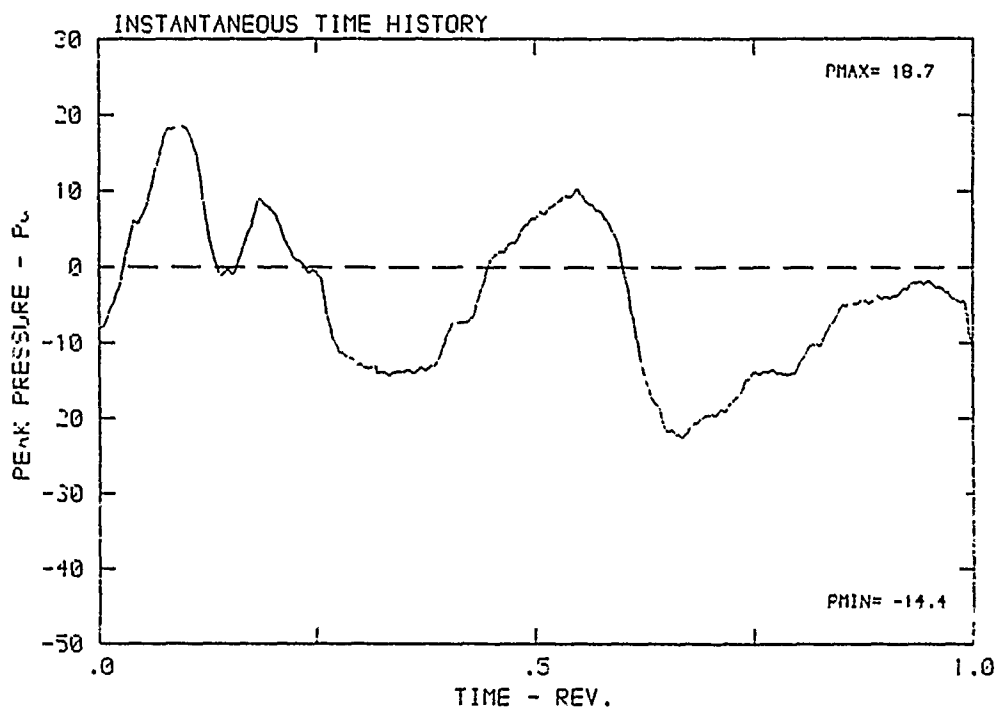
DATA POINT: BN-4    RUN: 54    MP: 7

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



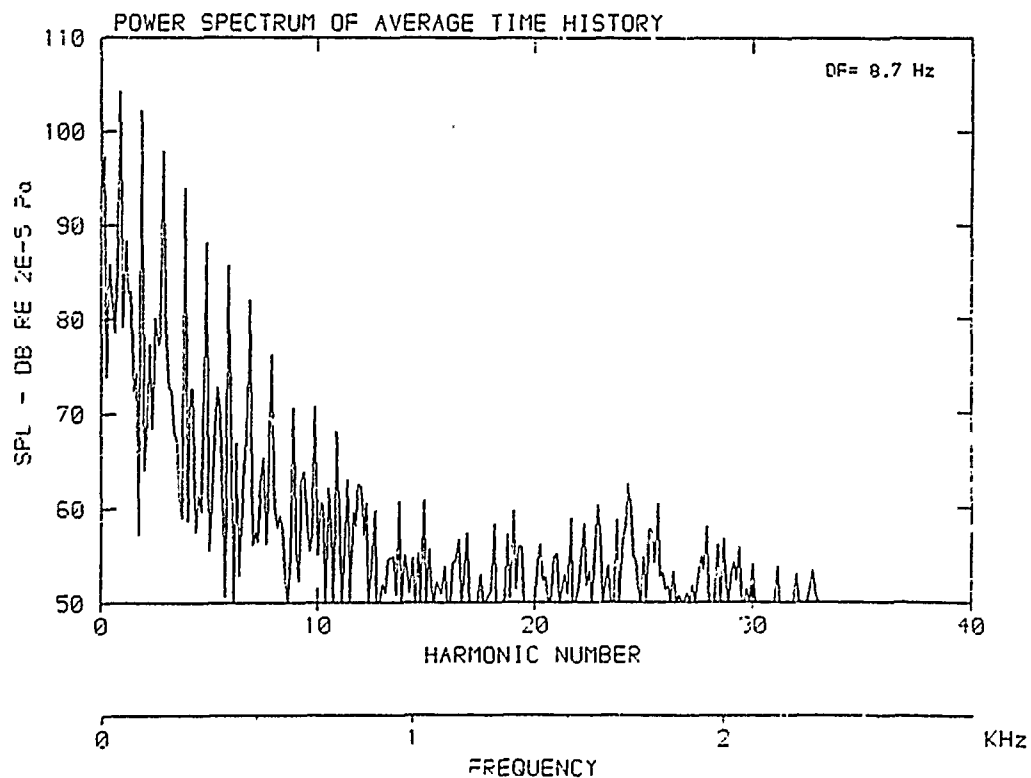
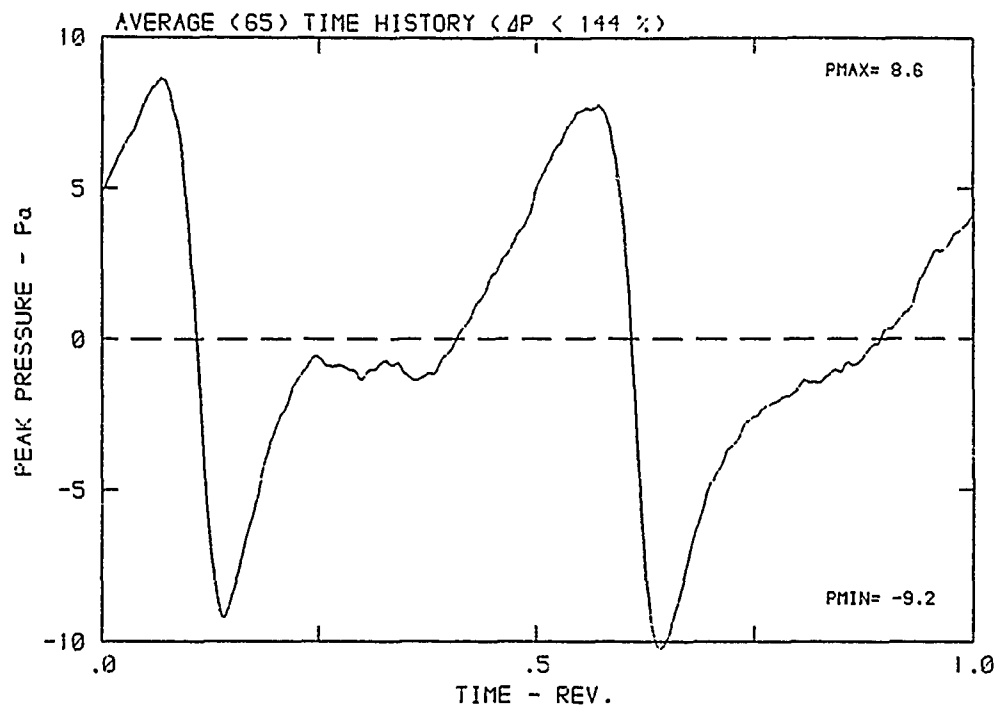
DATA POINT: BN-4      RUN: 54      MP: 8

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K



DATA POINT: BN-4      RUN: 54      MP: 8

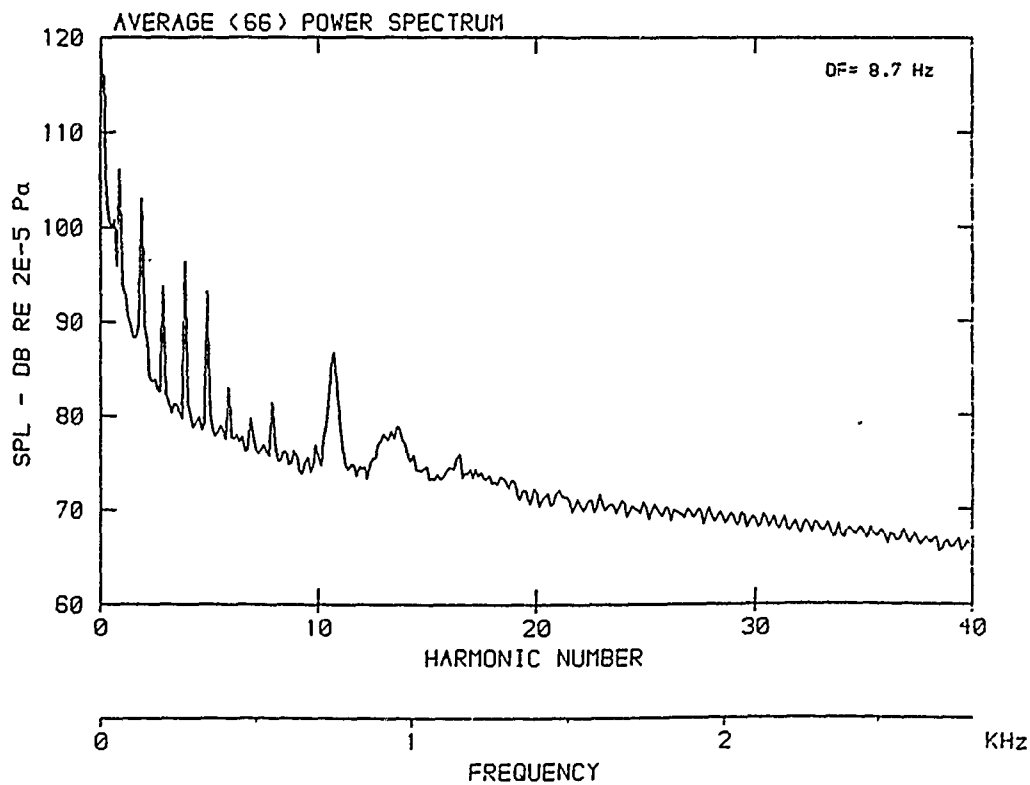
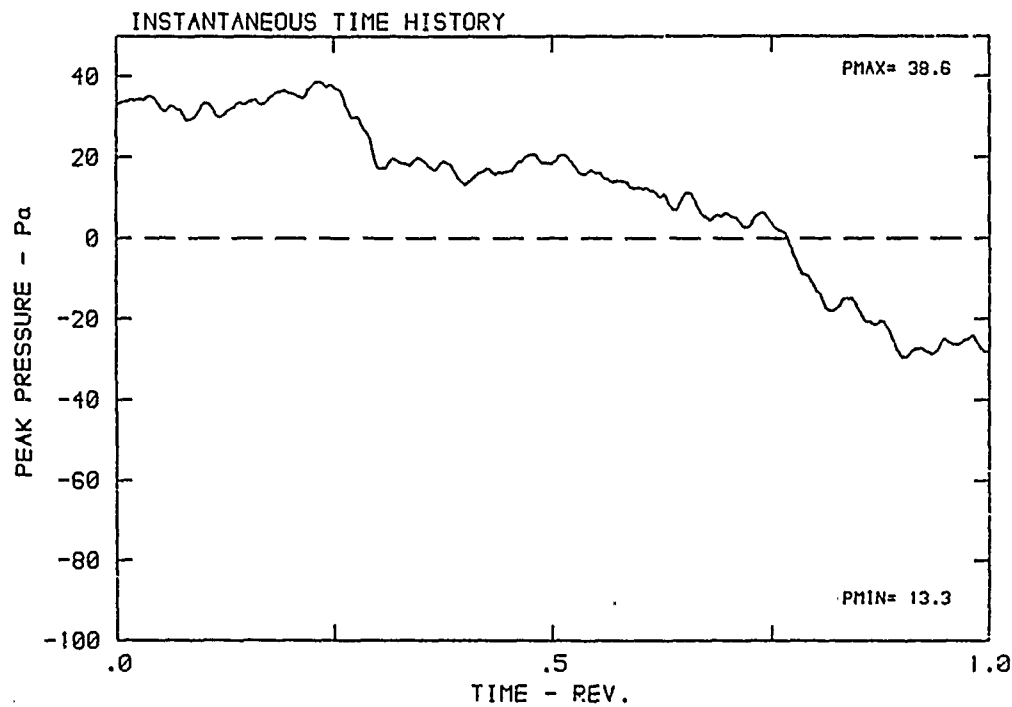
$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 288.7 K





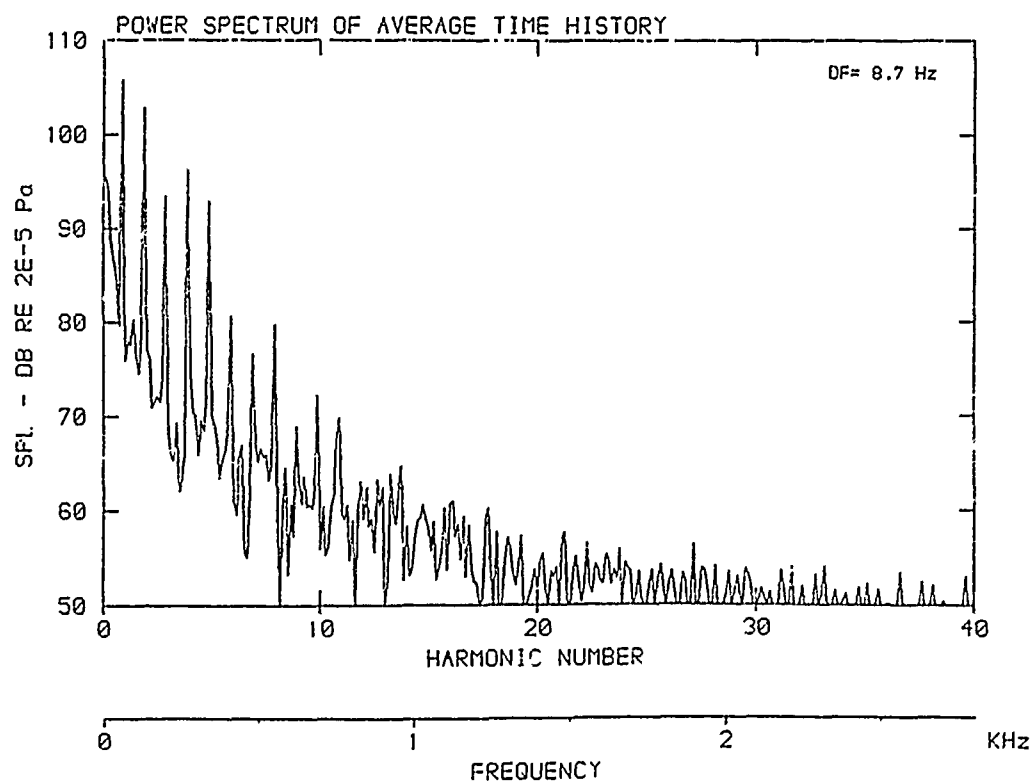
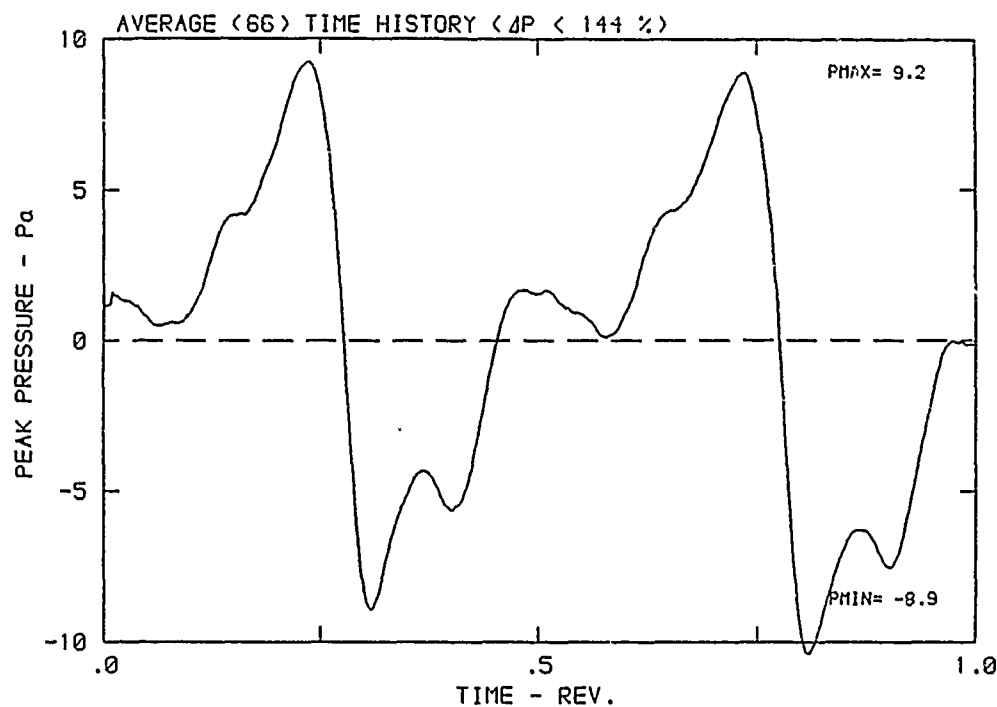
DATA POINT: BN-4    RUN: 54    MP: 9

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm     $v/u$ : .229     $\phi$ : .0°    T: 288.7 K



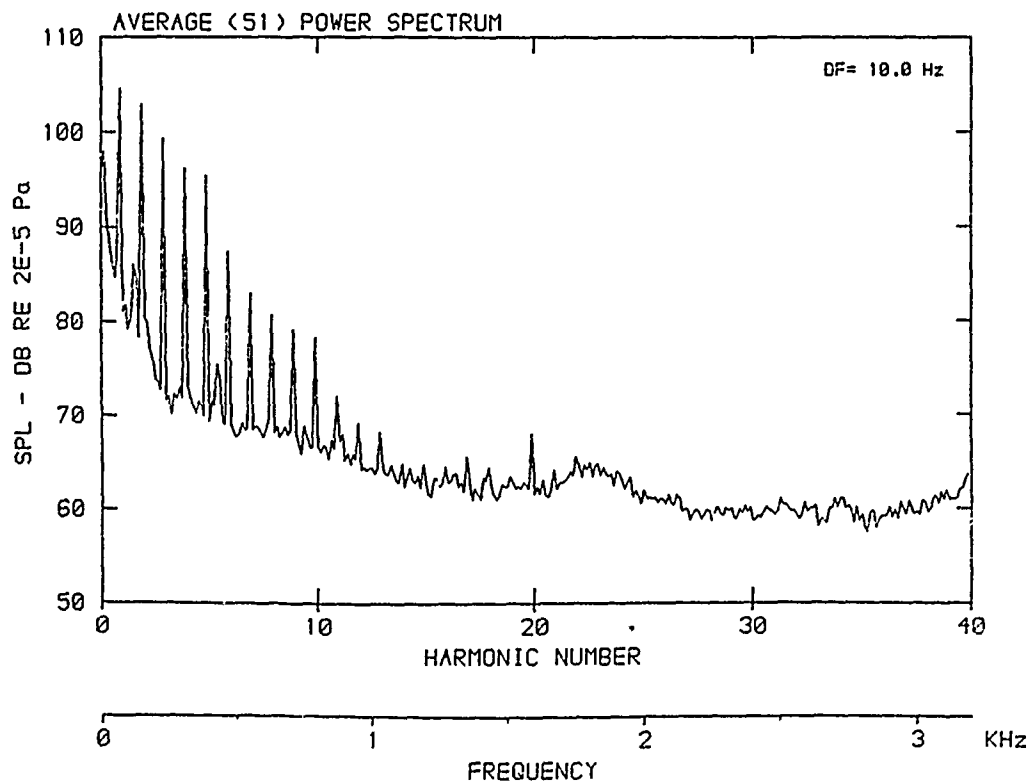
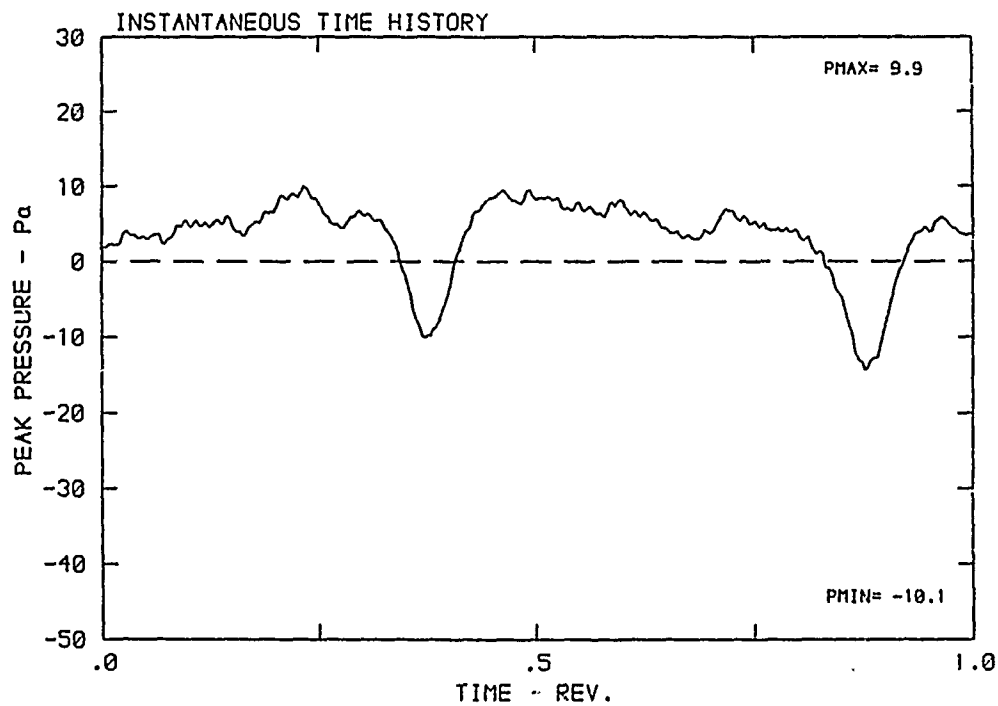
DATA POINT: BN-4    RUN: 54    MP: 9

$\beta$ : 19.9°    MH: .6729    n: 2100 rpm    v/u: .229     $\rho$ : .0°    T: 288.7 K



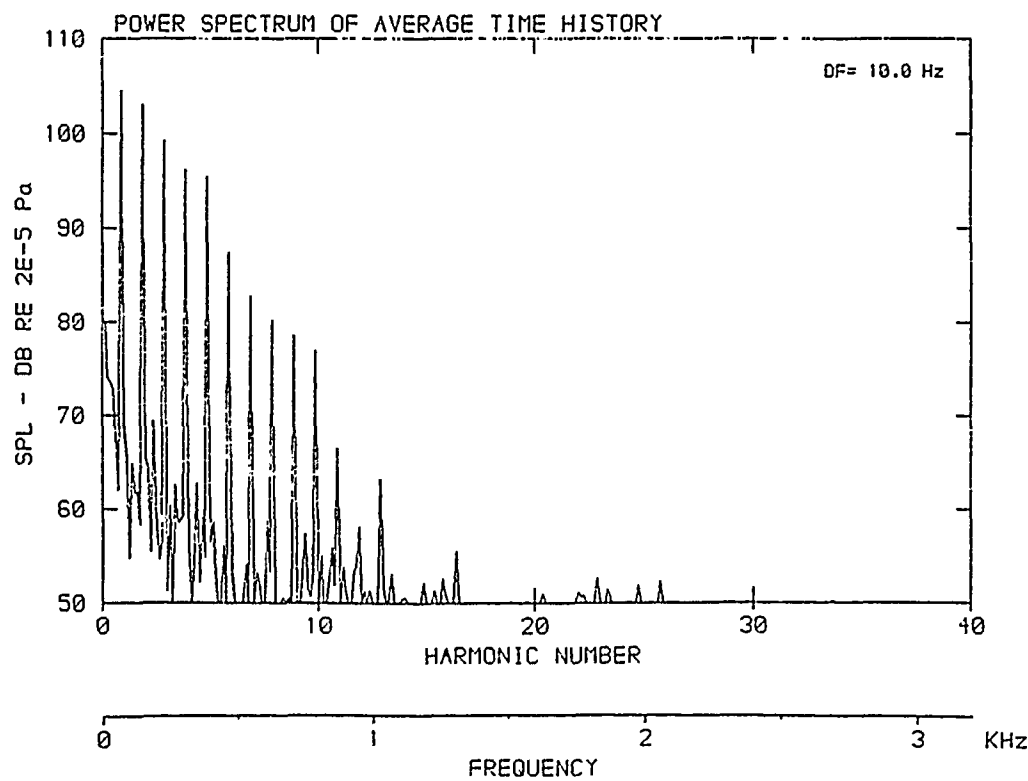
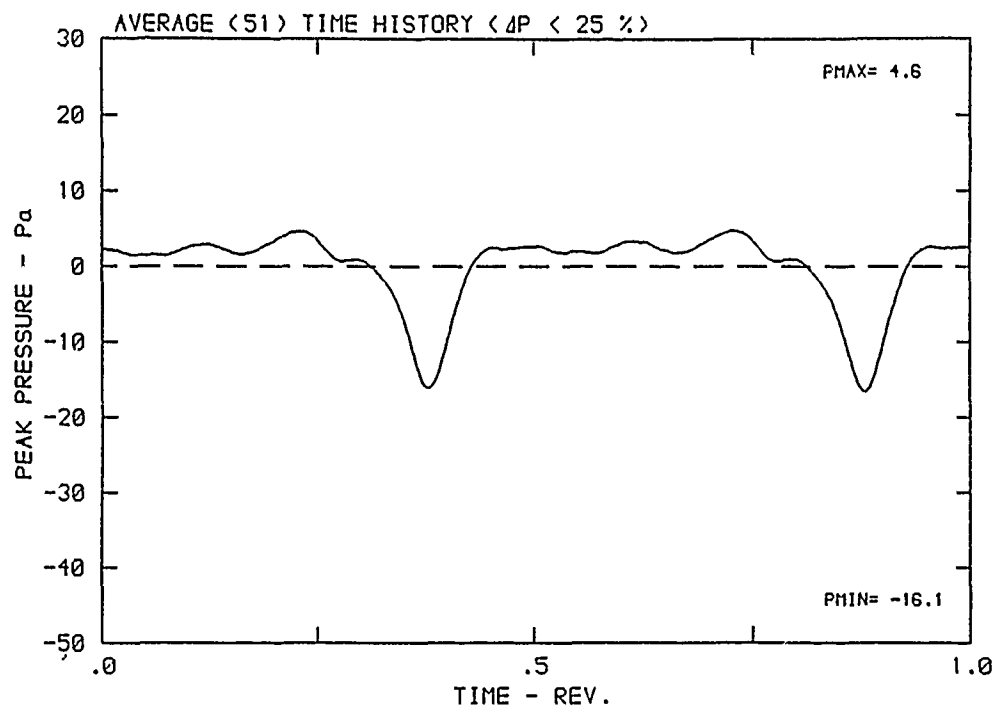
DATA POINT: BN-5 RUN: 53 MP: 1

$\beta$ : 19.9° MH: .7639 n: 2400 rpm v/u: .202  $\phi$ : .0° T: 289.3 K



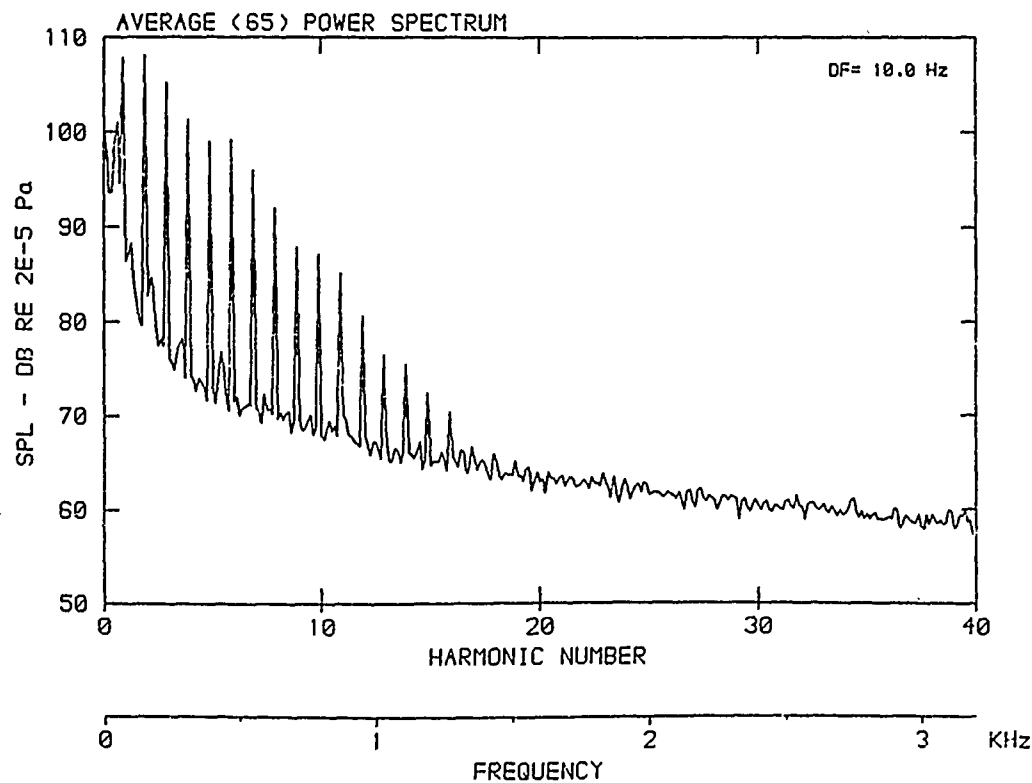
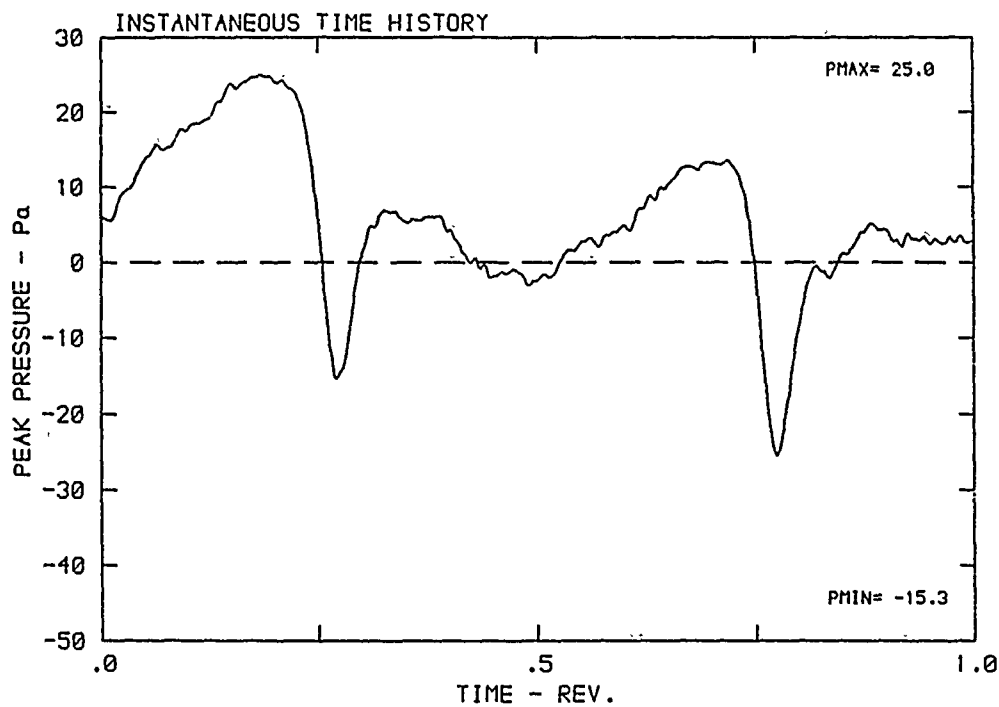
DATA POINT: BN-5    RUN: 53    MP: 1

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm     $v/u$ : .202     $\phi$ : .0°    T: 289.3 K



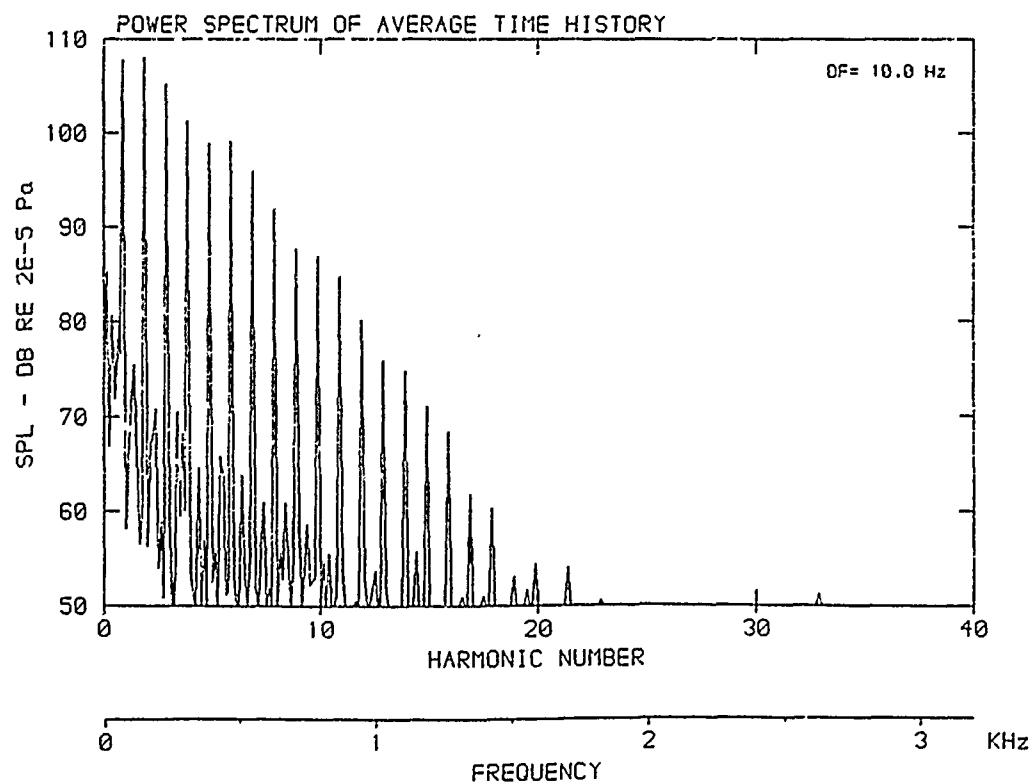
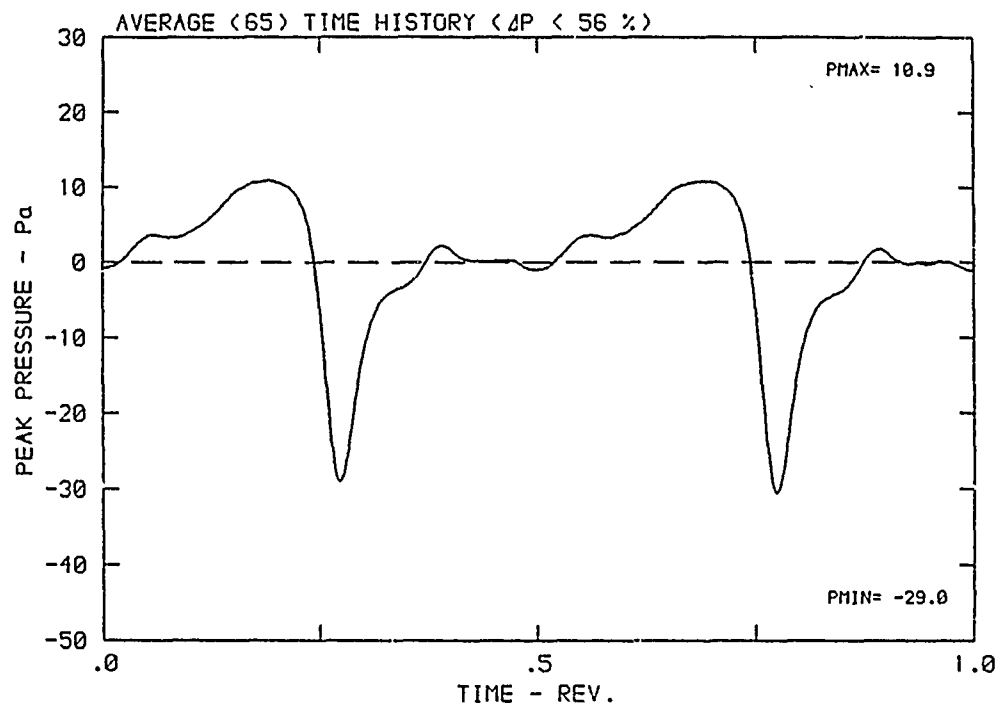
DATA POINT: BN-5    RUN: 53    MP: 2

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



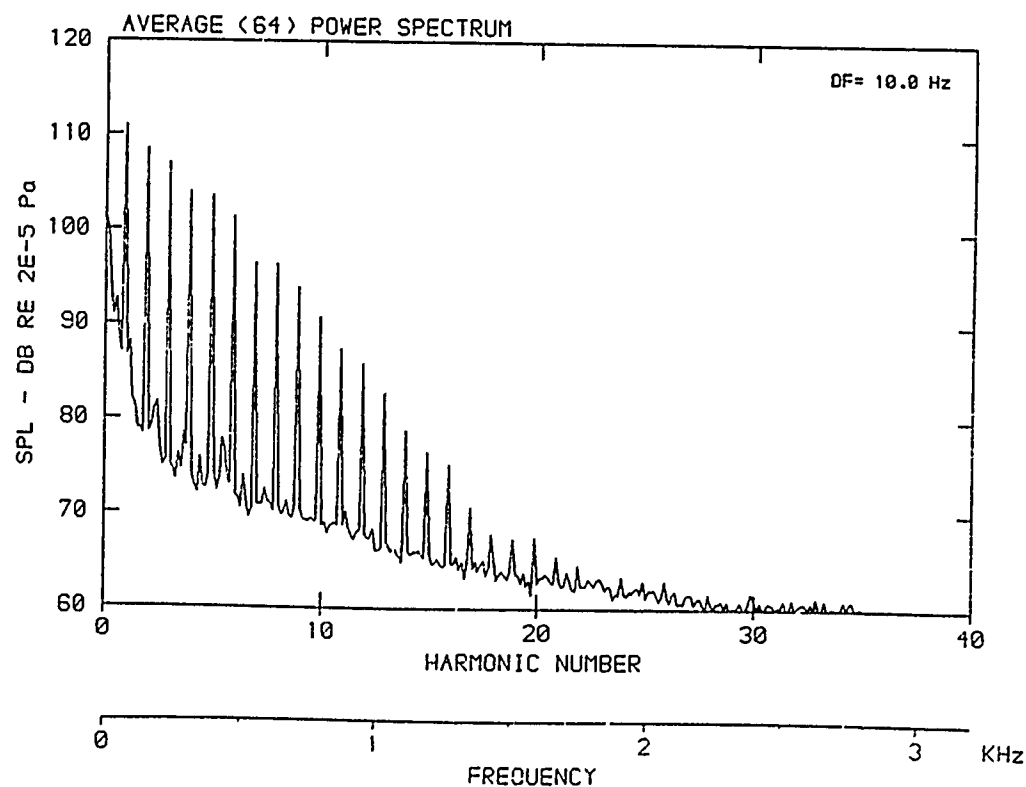
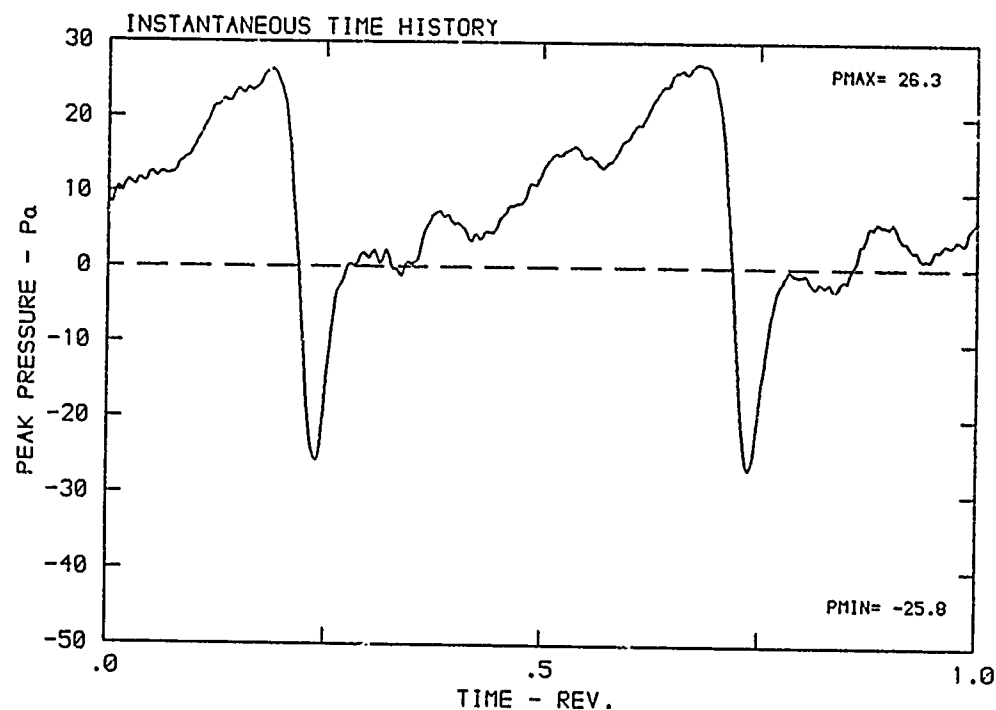
DATA POINT: BN-5 RUN: 53 MP: 2

$\beta$ : 19.9° MH: .7639 n: 2400 rpm v/u: .202  $\phi$ : .0° T: 289.3 K



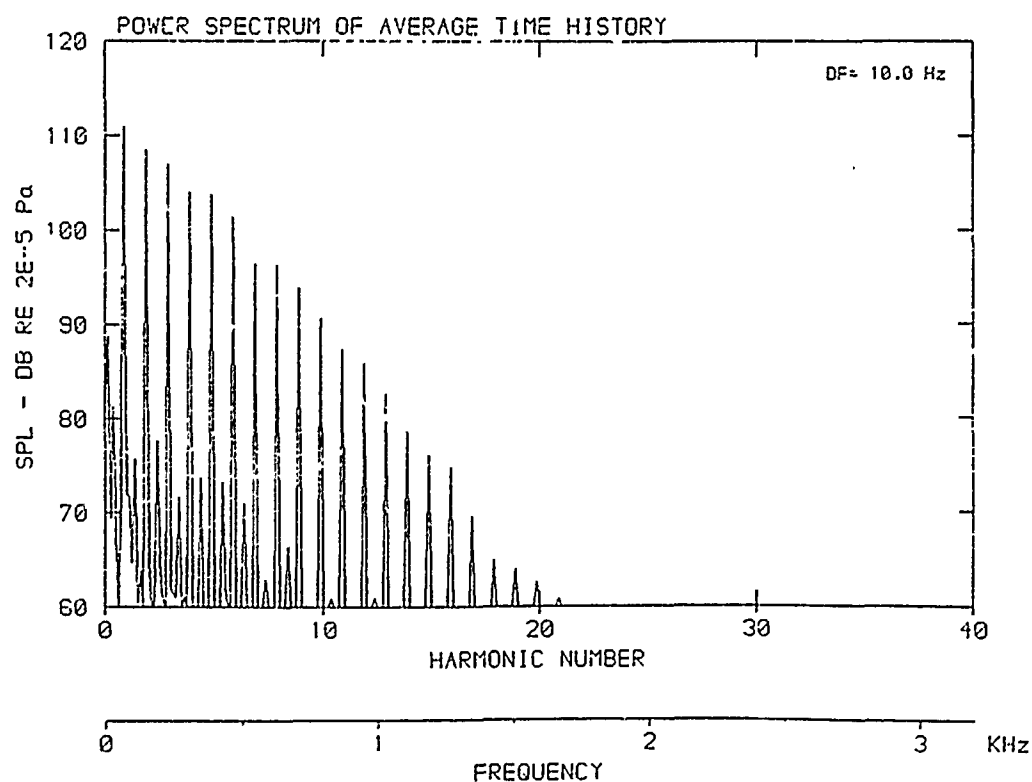
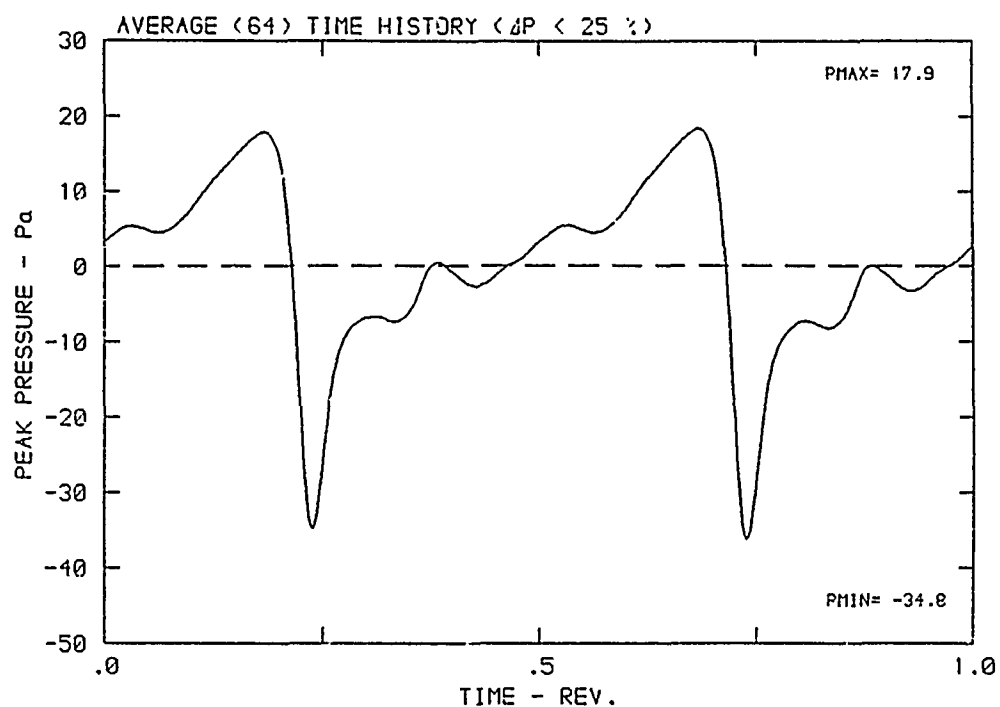
DATA POINT: BN-5    RUN: 53    MP: 3

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



DATA POINT: BN-5      RUN: 53      MP: 3

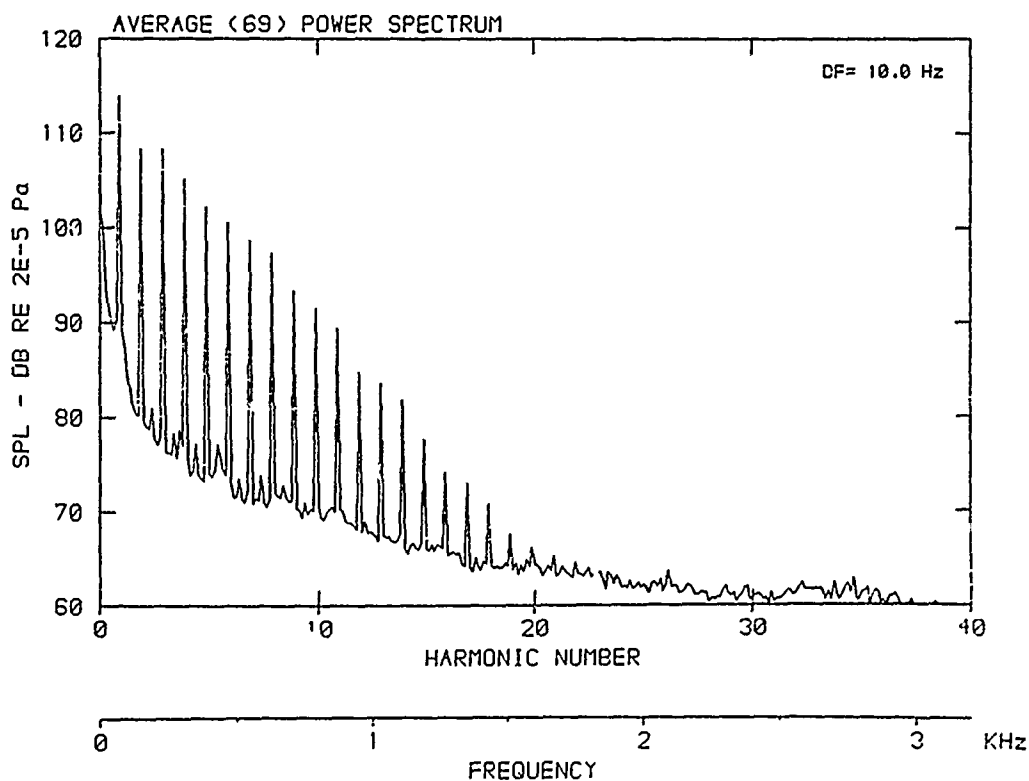
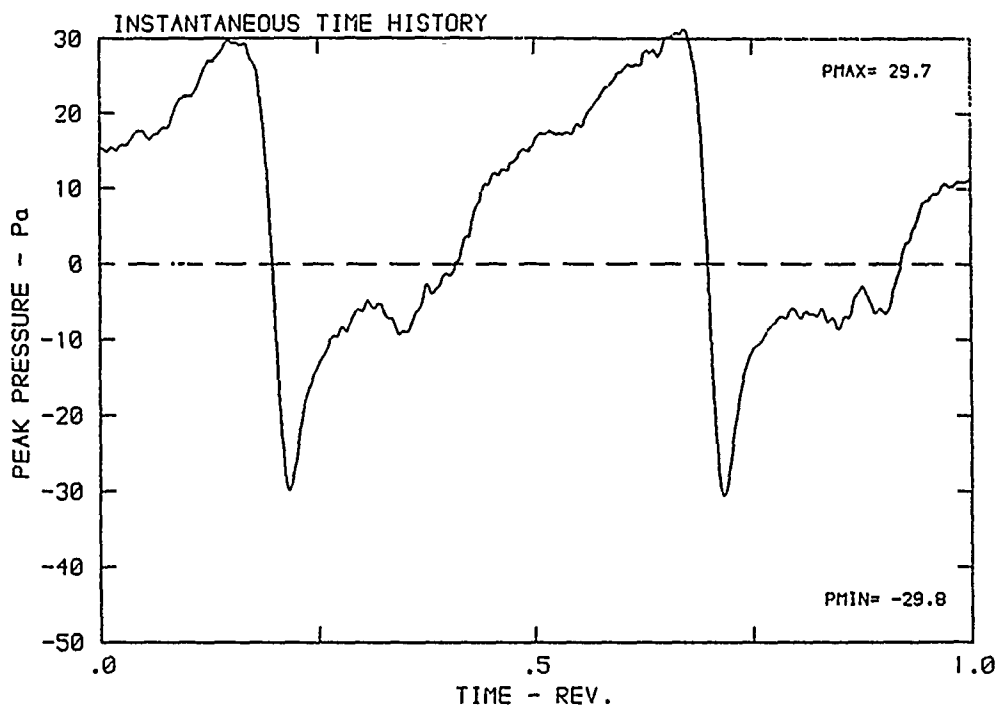
$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K





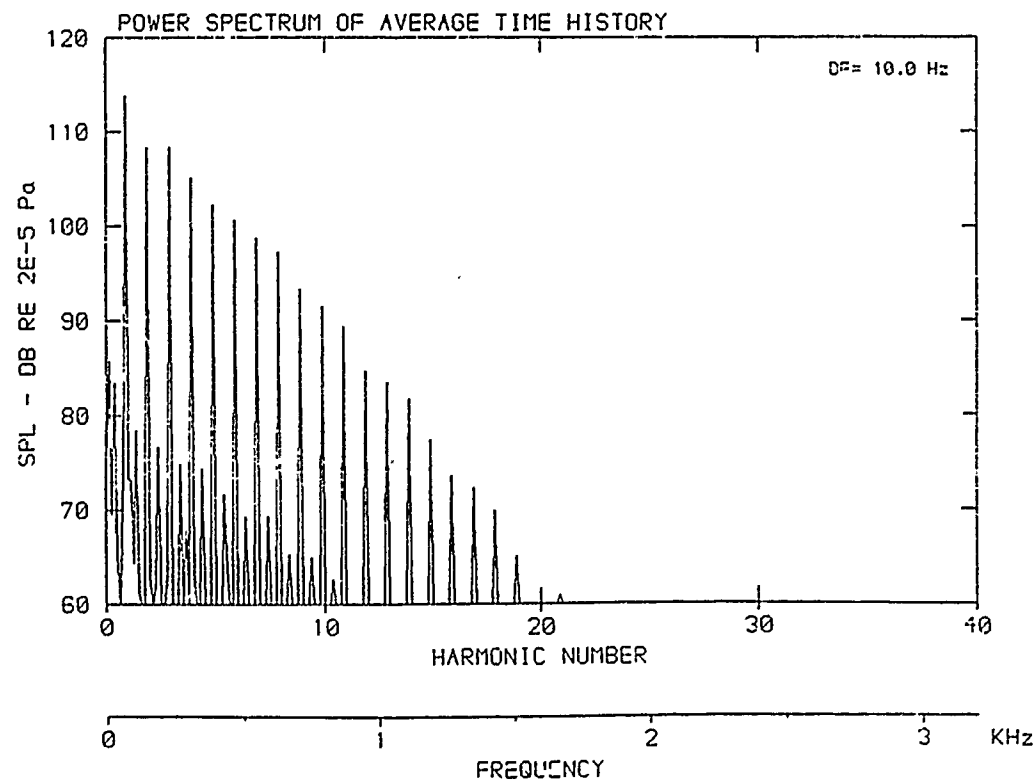
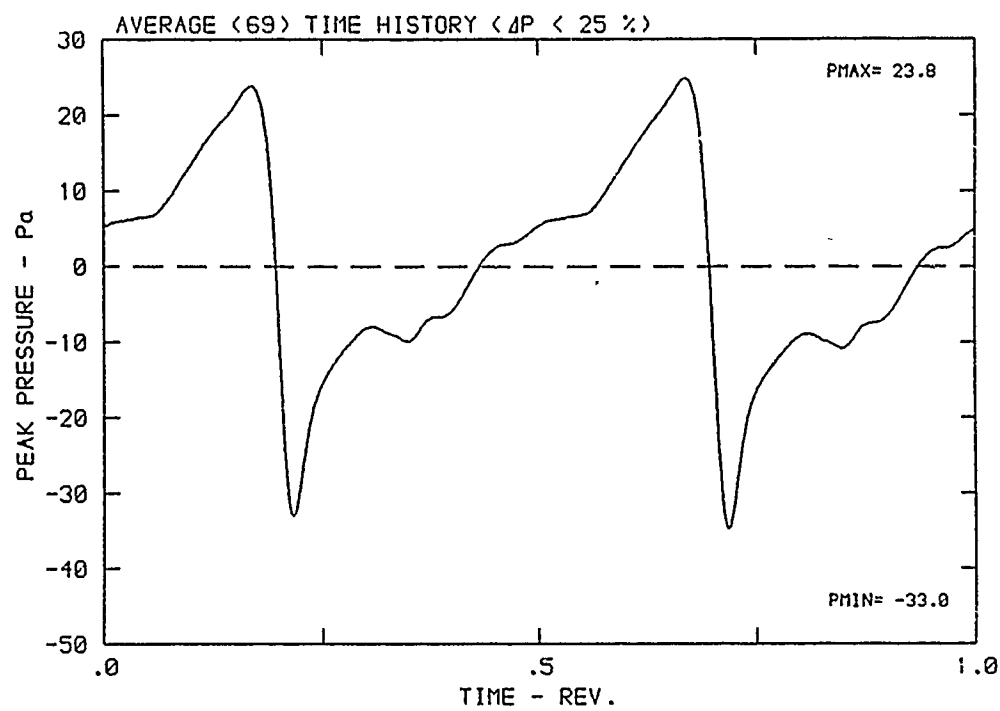
DATA POINT: BN-5    RUN: 53    MP: 4

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



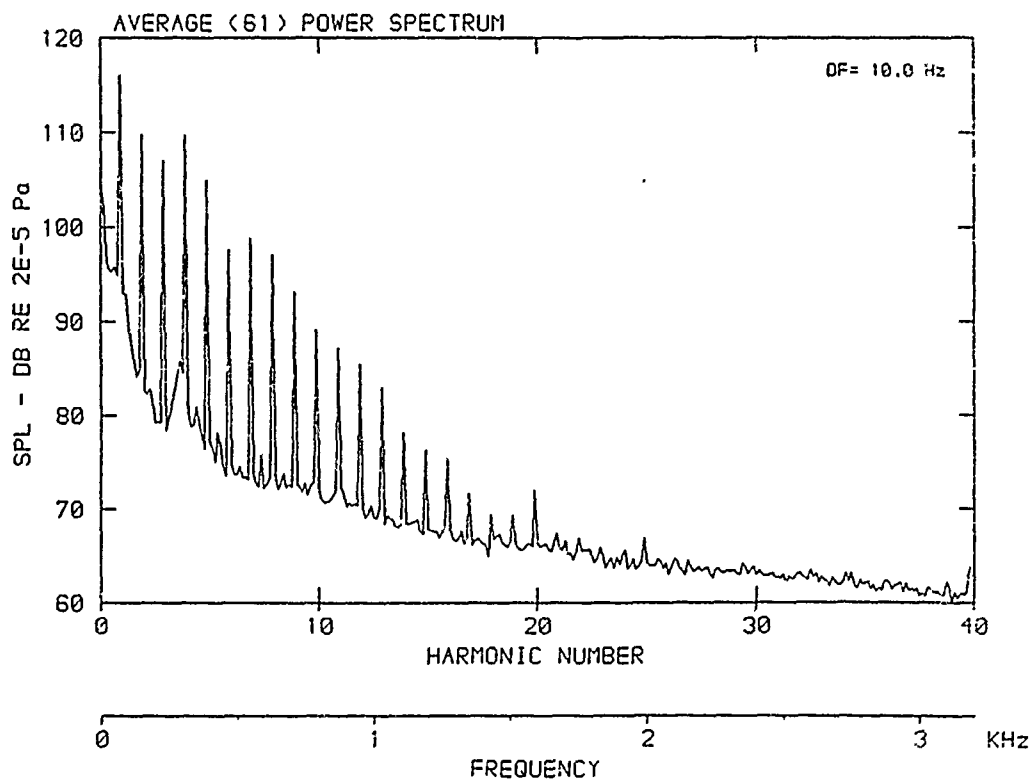
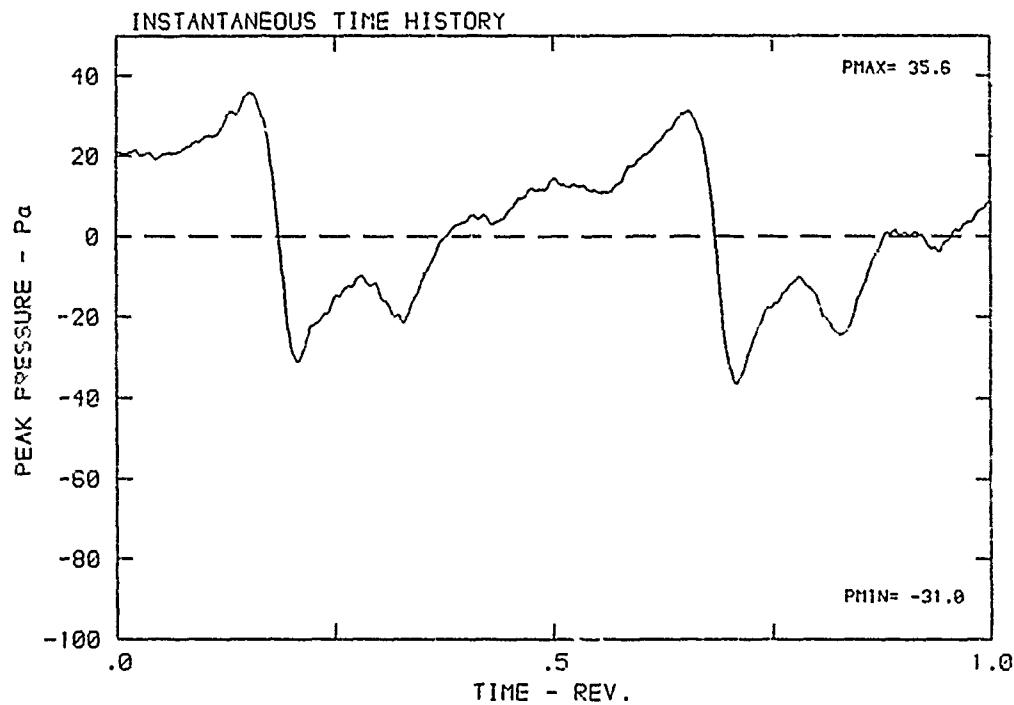
DATA POINT: BN-5    RUN: 53    MP: 4

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



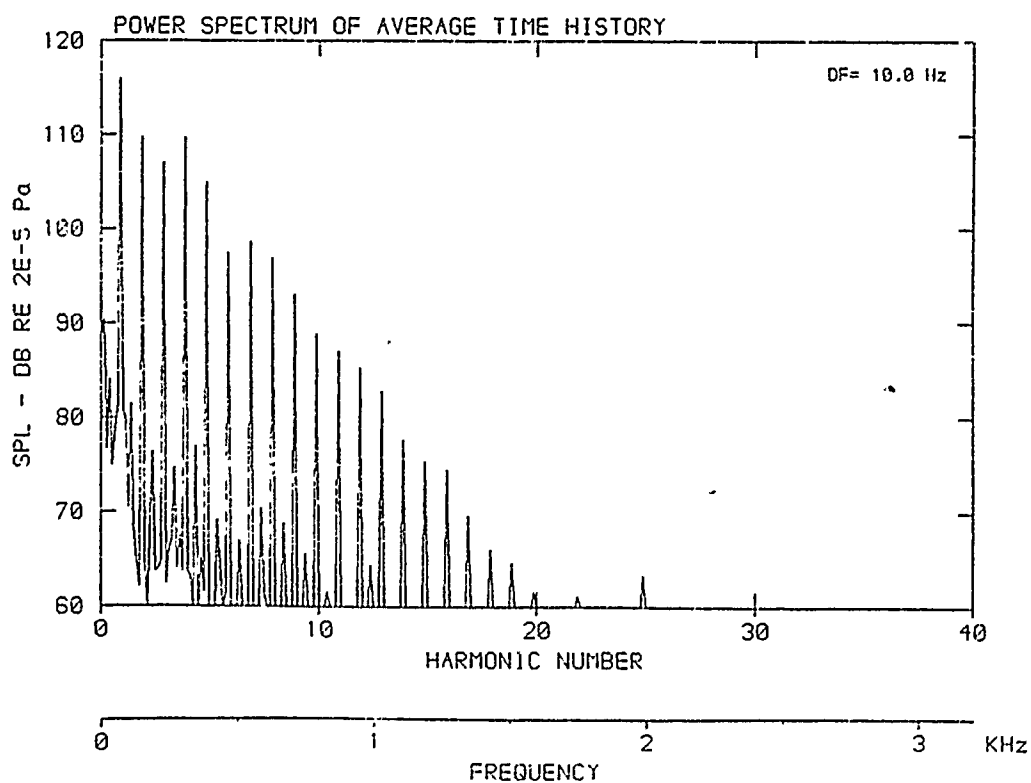
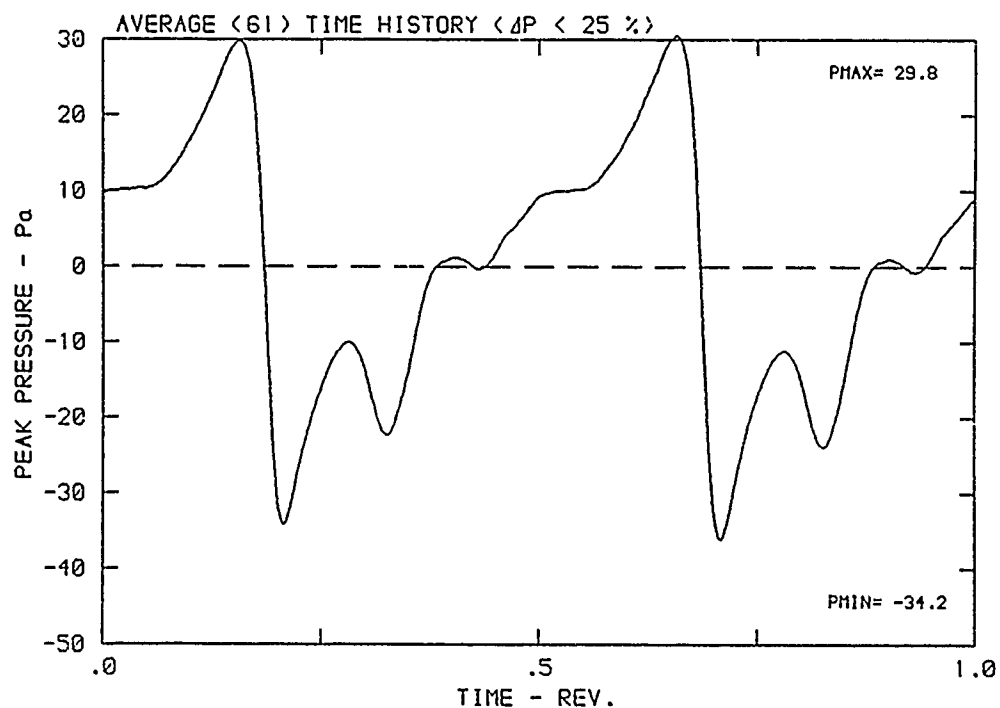
DATA POINT: BN-5 FUN: 50 MP: 5

$\beta$ : 19.9° MH: .7639 n: 2400 rpm v/u: .202  $\phi$ : .0° T: 299.3 K



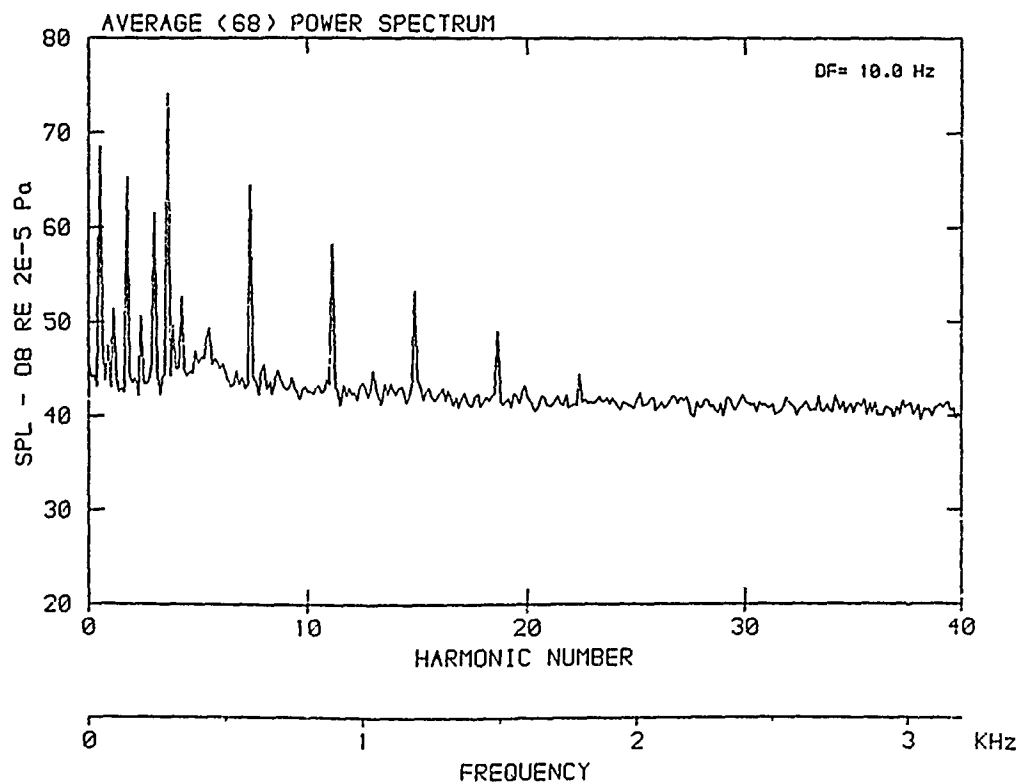
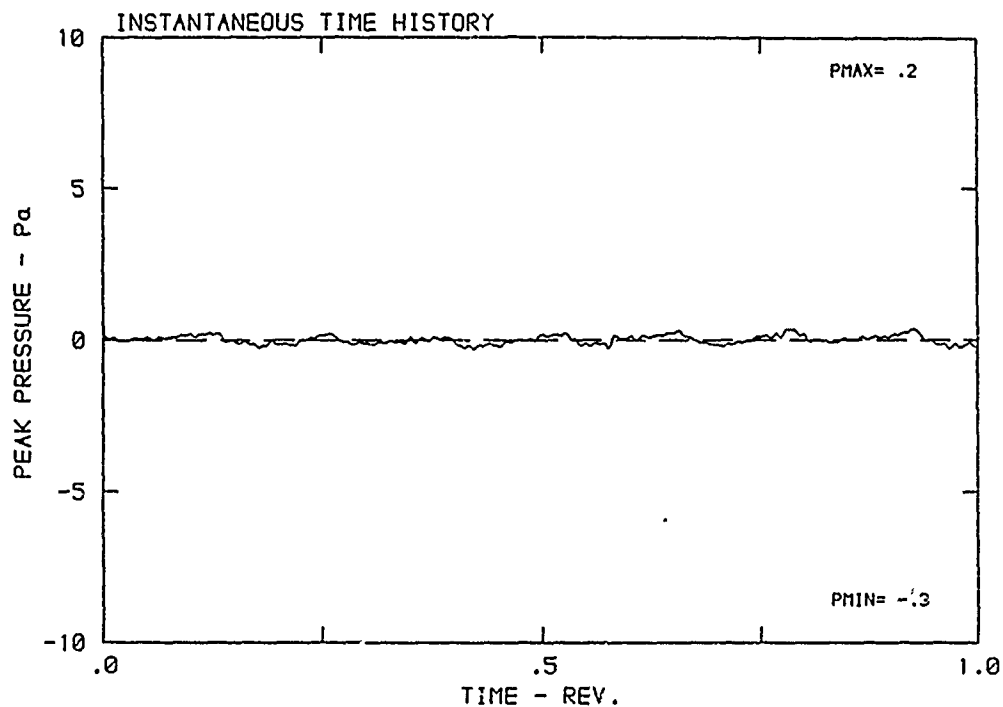
DATA POINT: BN-5      RUN: 53      MP: 5

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



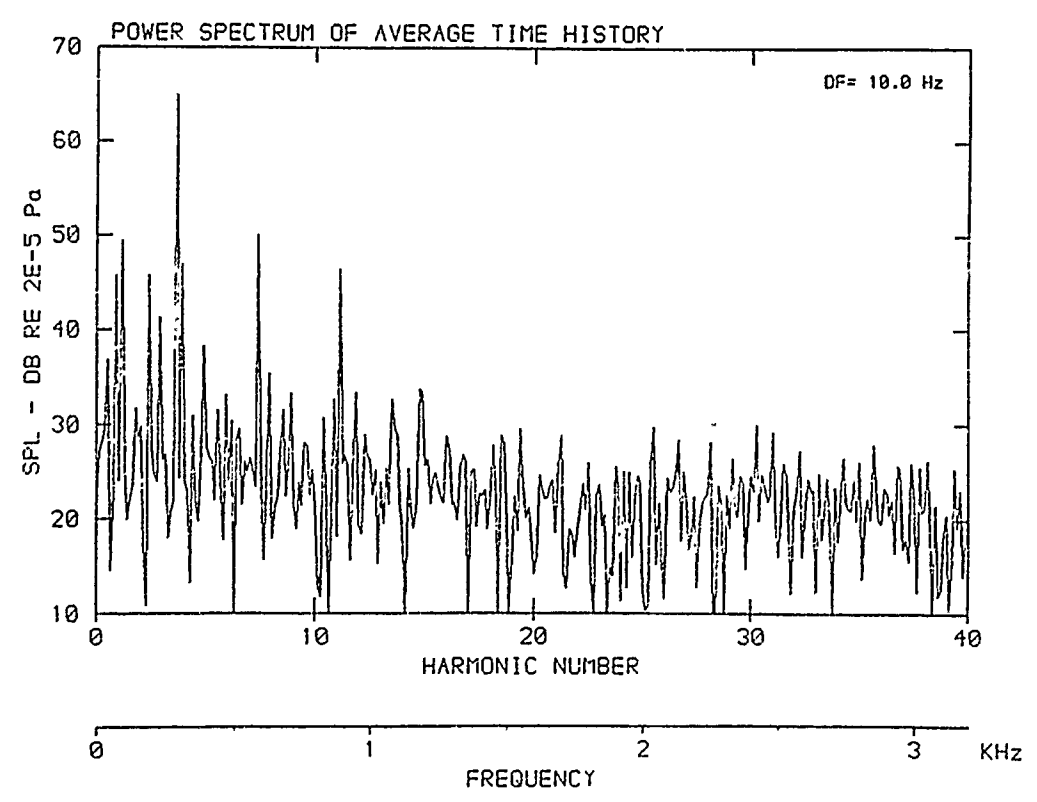
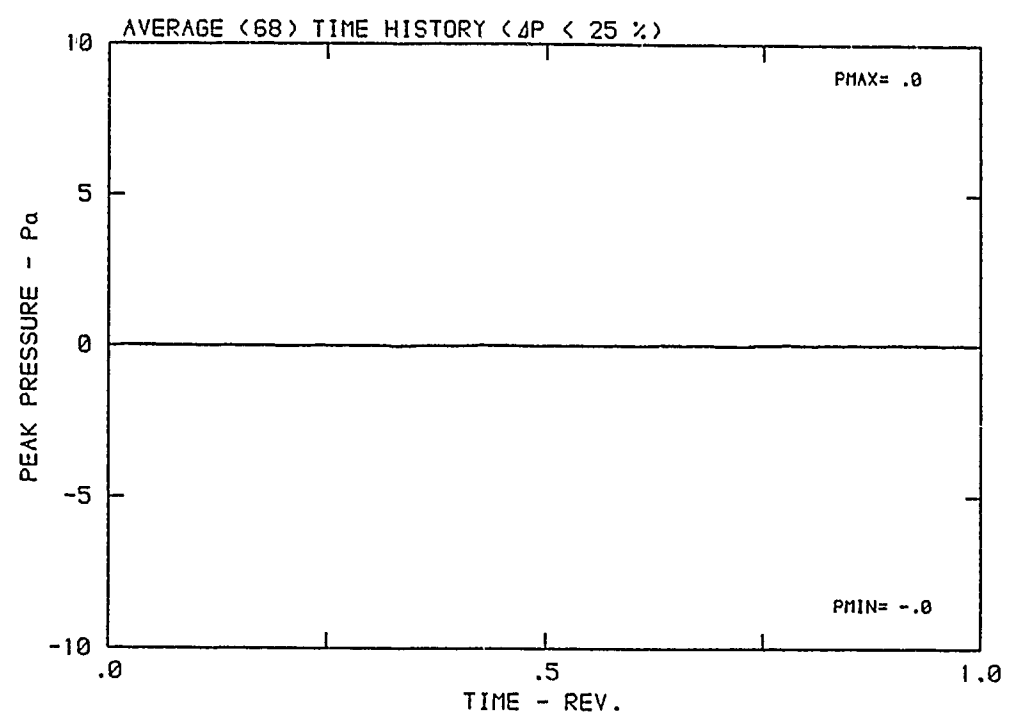
DATA POINT: BN-5    RUN: 53    MP: 6

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



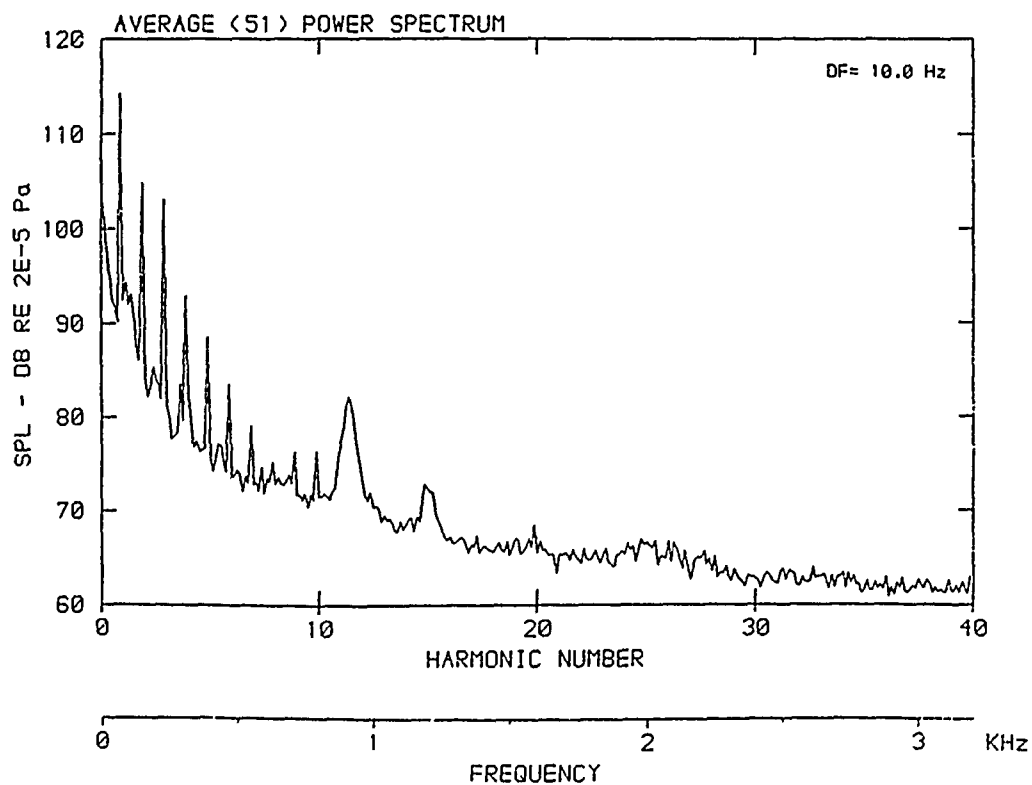
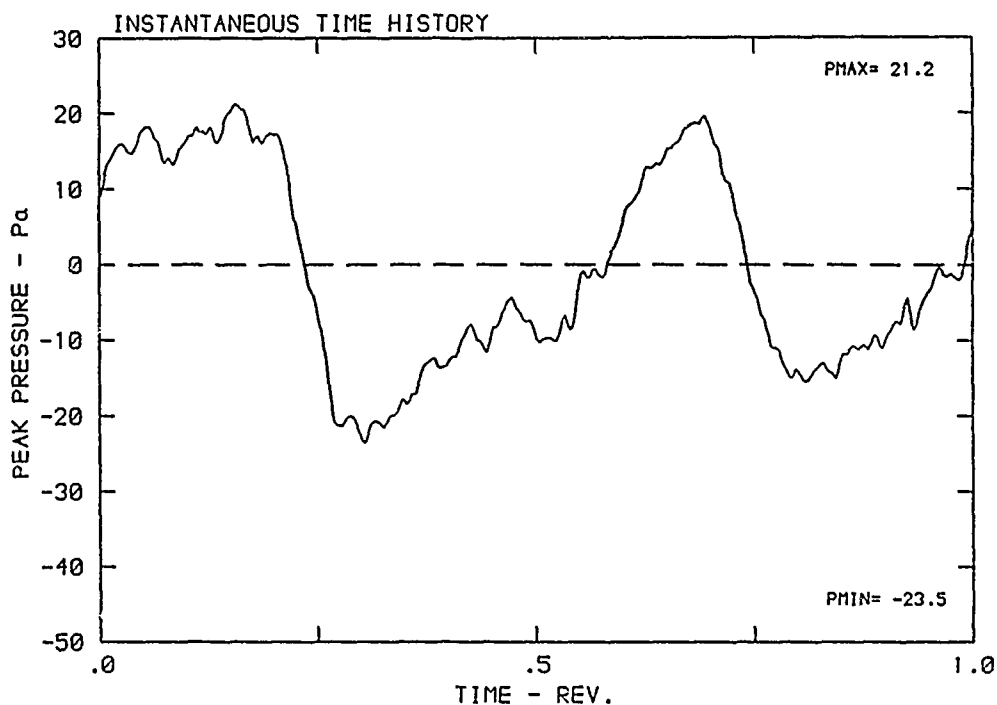
DATA POINT: BN-5      RUN: 53      MP: 6

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



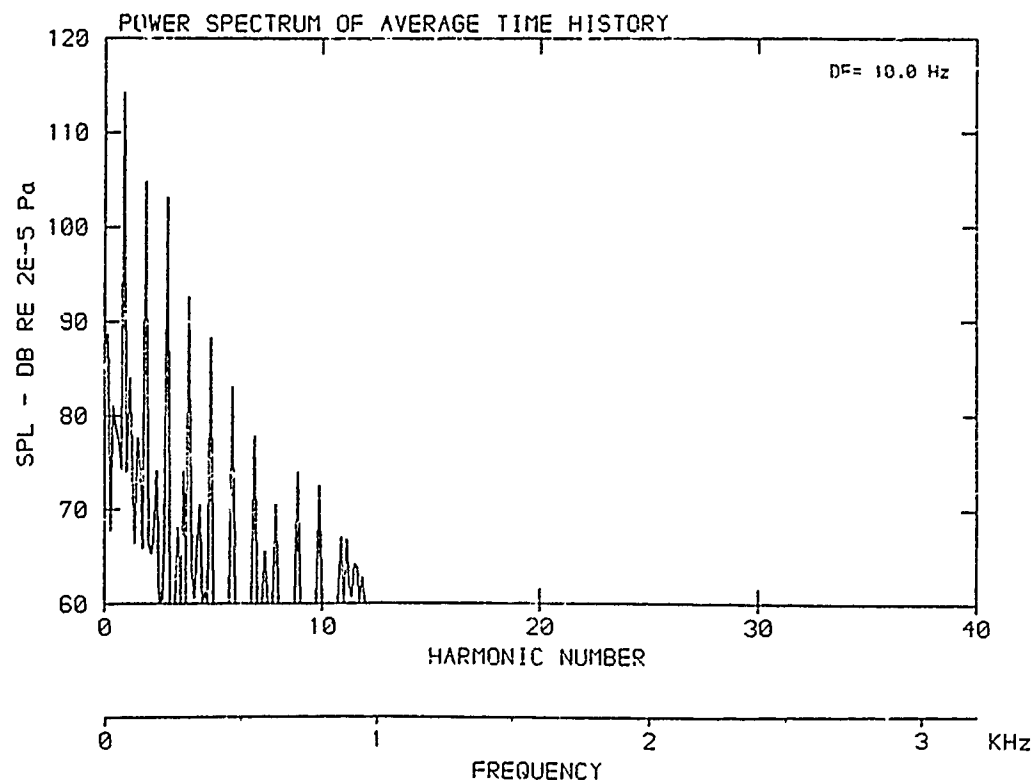
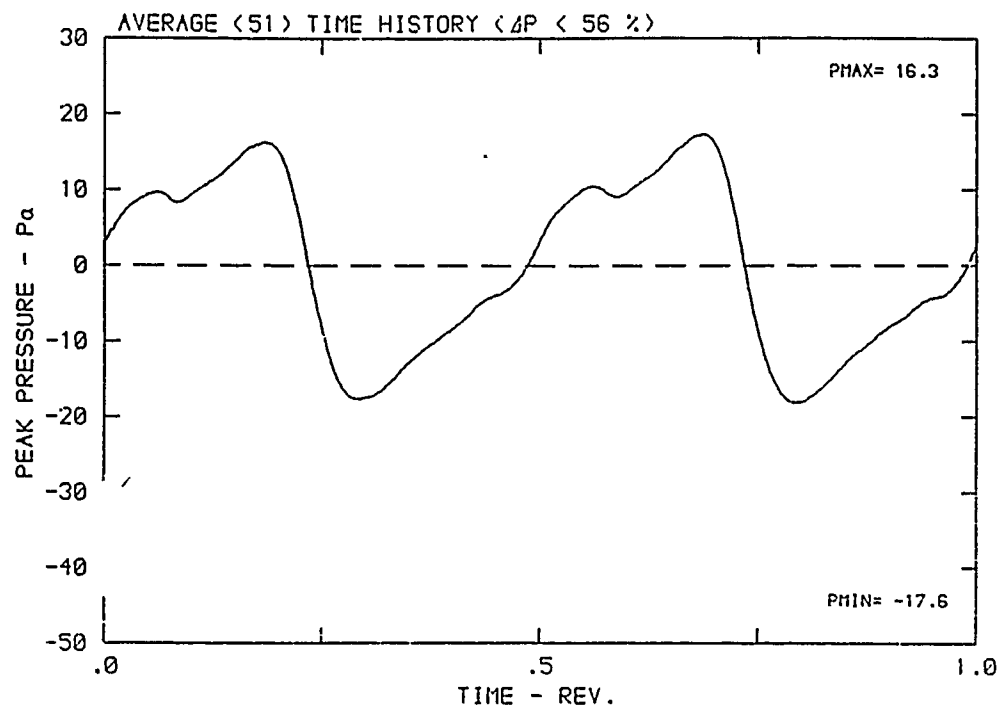
DATA POINT: BN-5      RUN: 53      MP: 7

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



DATA POINT: BN-5      RUN: 53      MP: 7

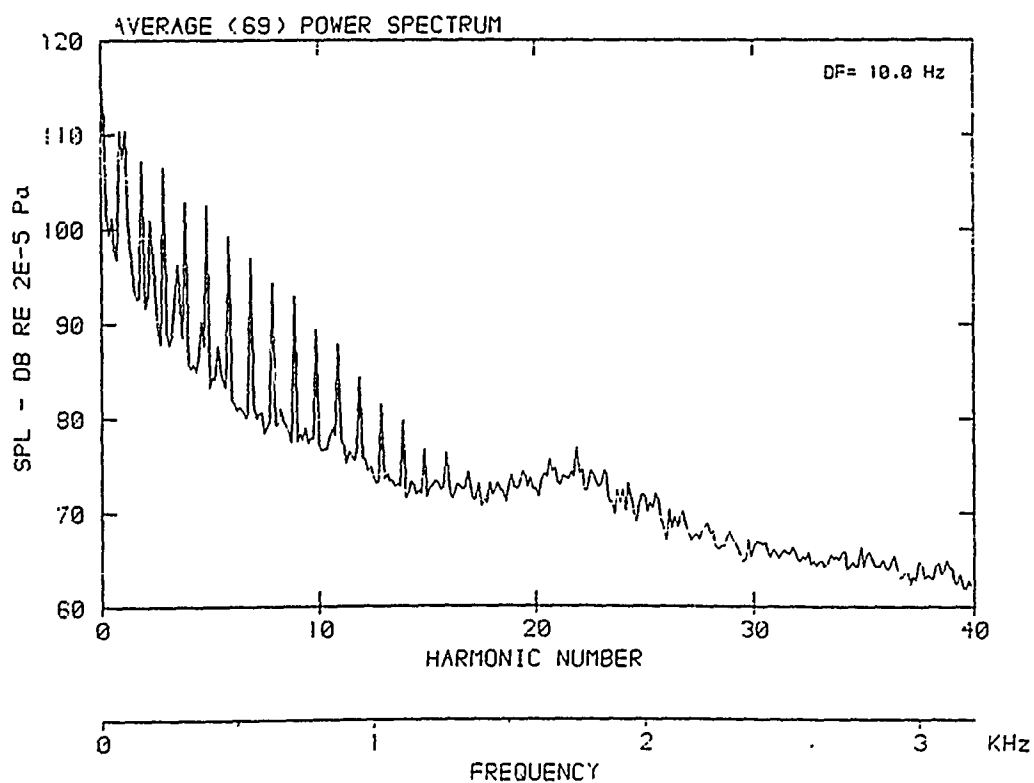
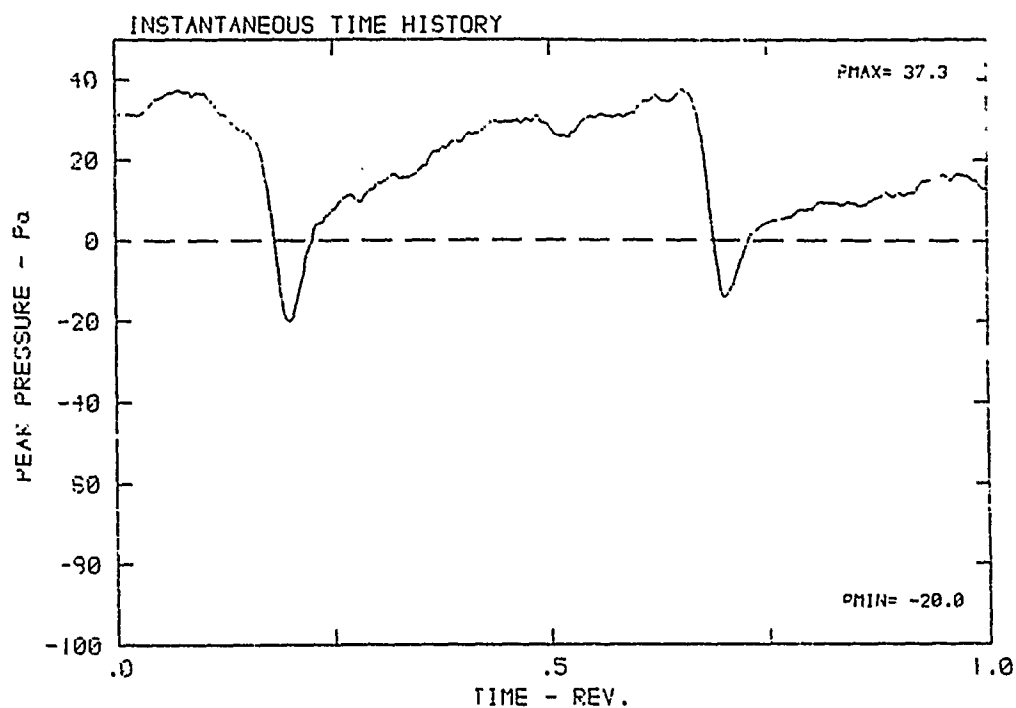
$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K





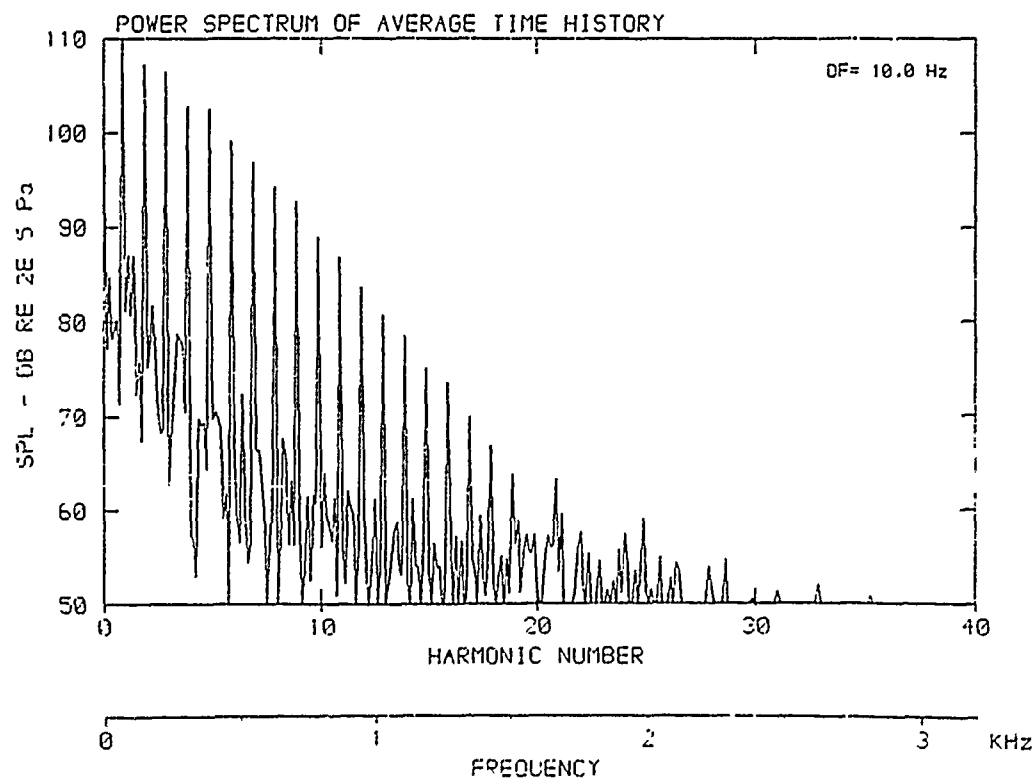
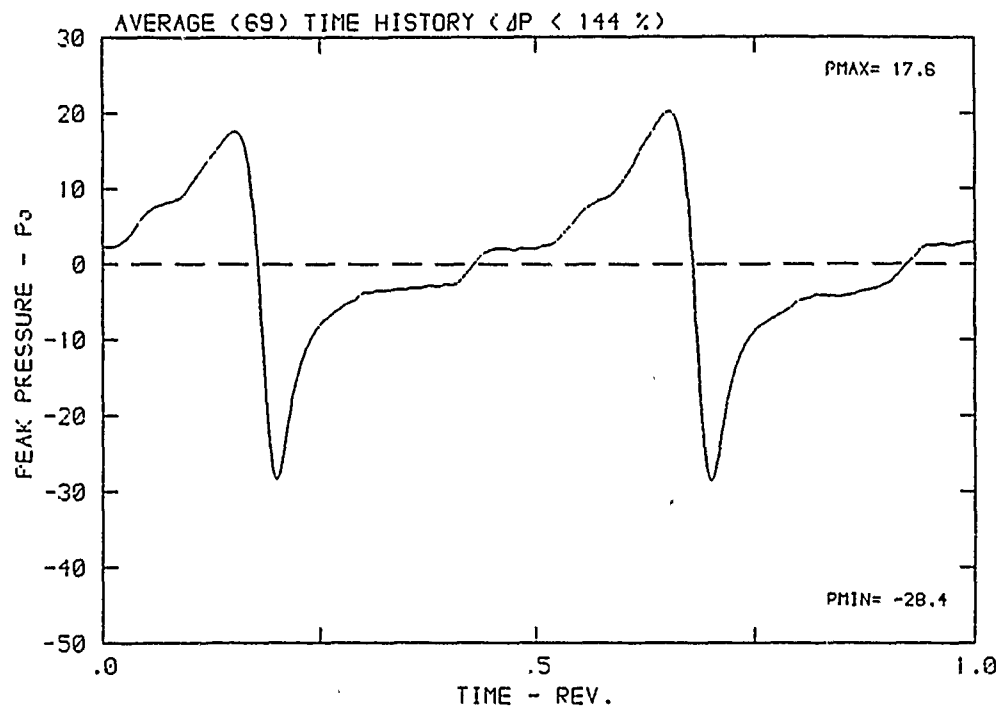
DATA POINT: BN-5 RUN: 53 MP: 8

$\beta$ : 19.9° MH: .7639 n: 2400 rpm v/u: .202  $\phi$ : .0° T: 239.3 K



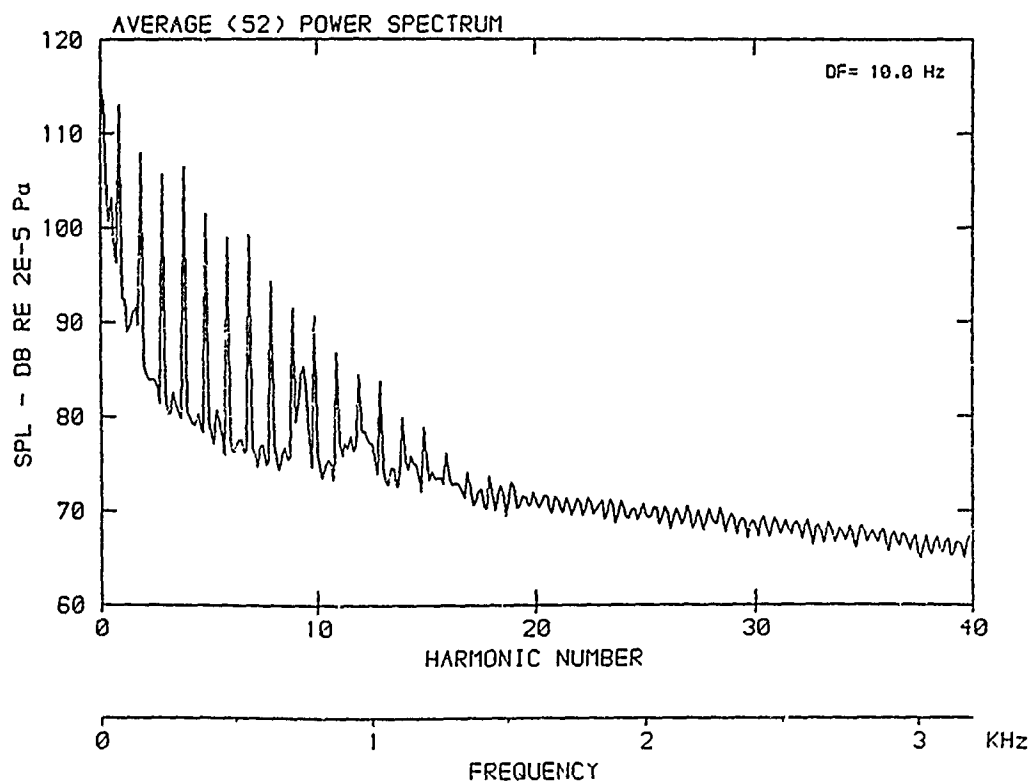
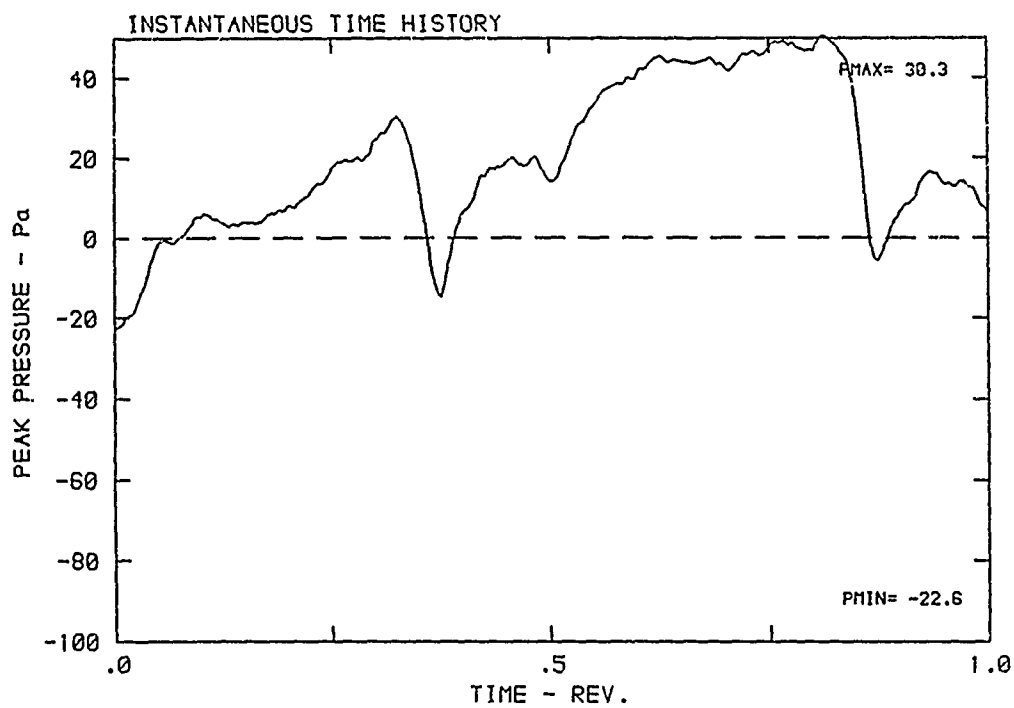
DATA POINT: BN-5      RUN: 53      MP: 8

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



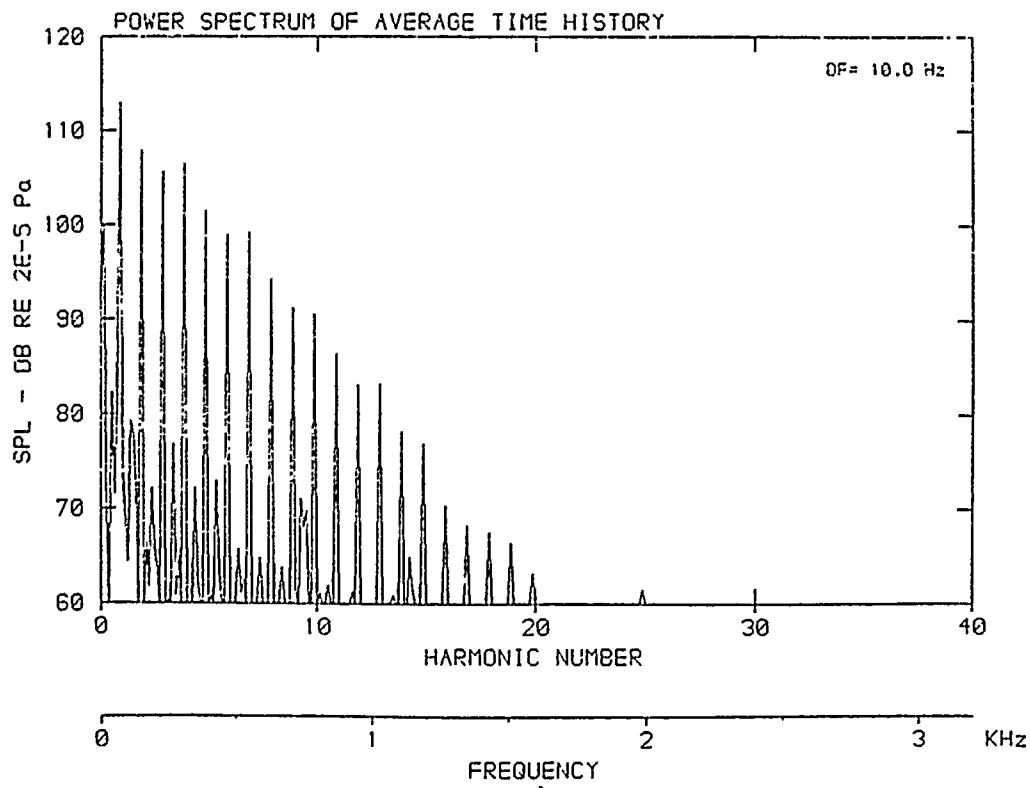
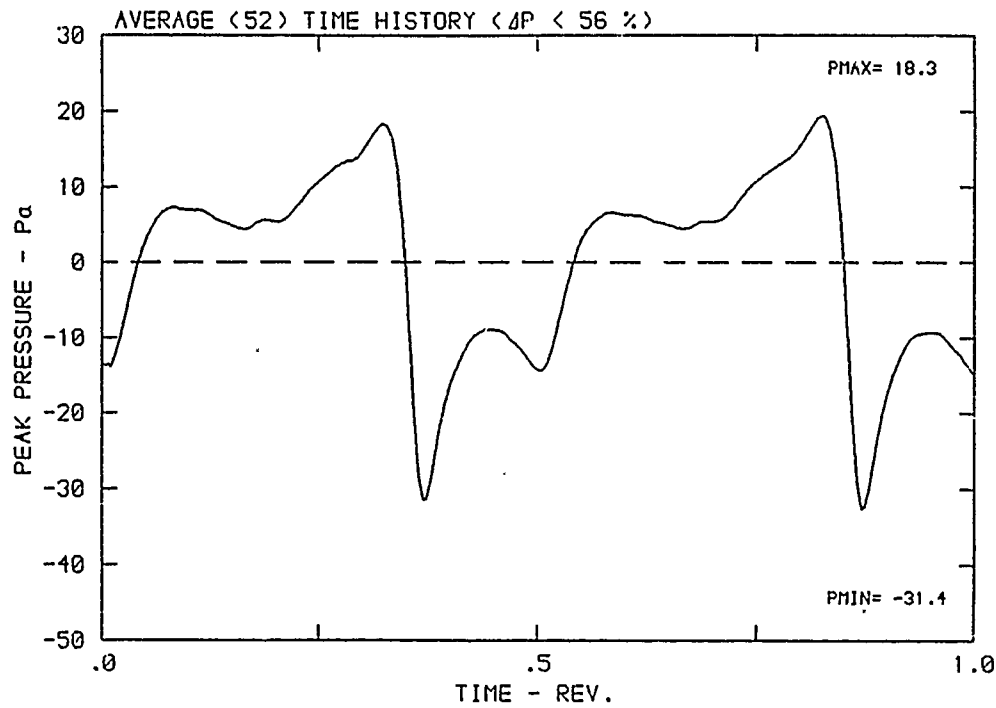
DATA POINT: BN-5      RUN: 53      MP: 9

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



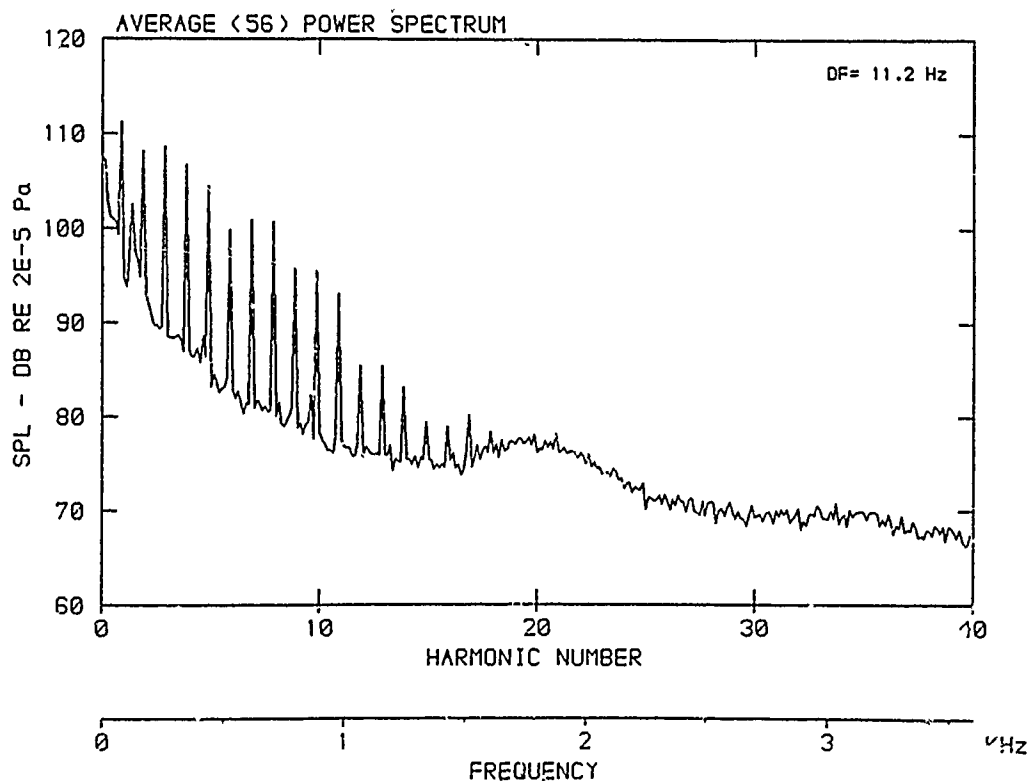
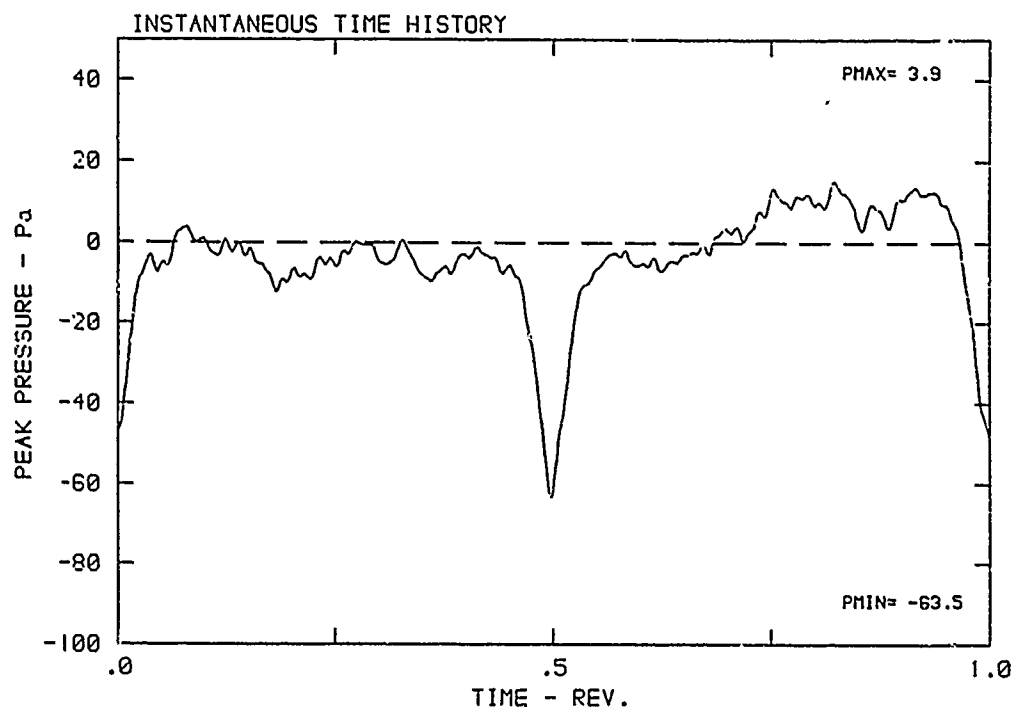
DATA POINT: BN-5      RUN: 53      MP: 9

$\beta$ : 19.9°    MH: .7639    n: 2400 rpm    v/u: .202     $\phi$ : .0°    T: 289.3 K



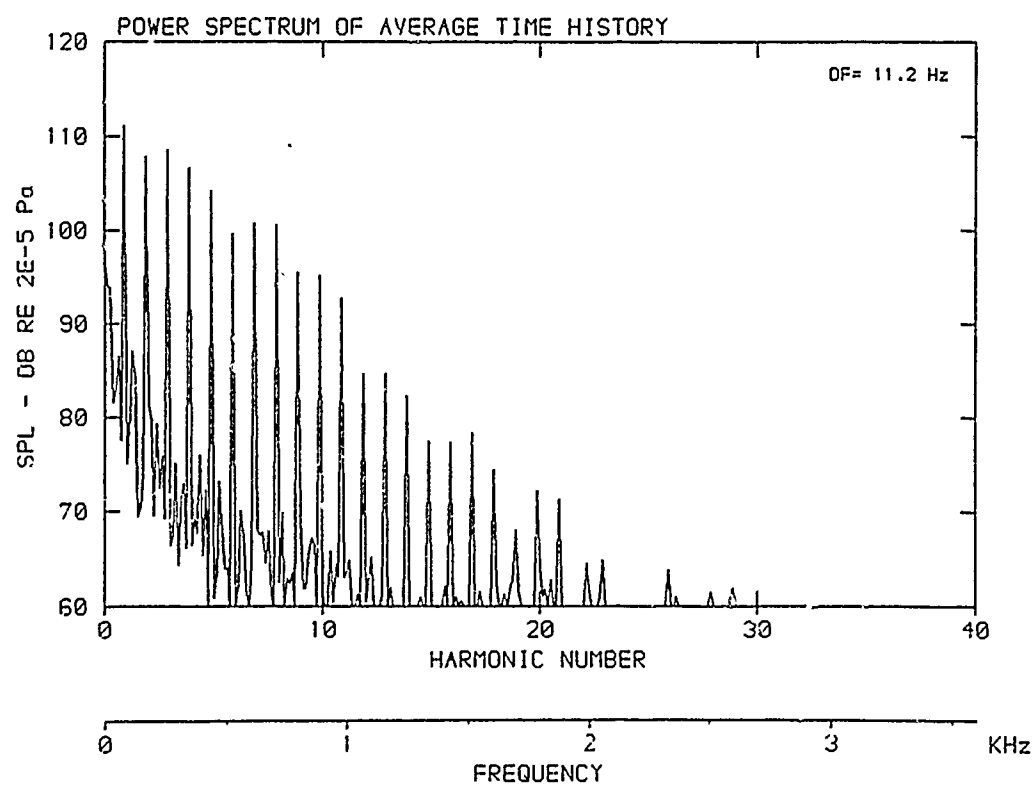
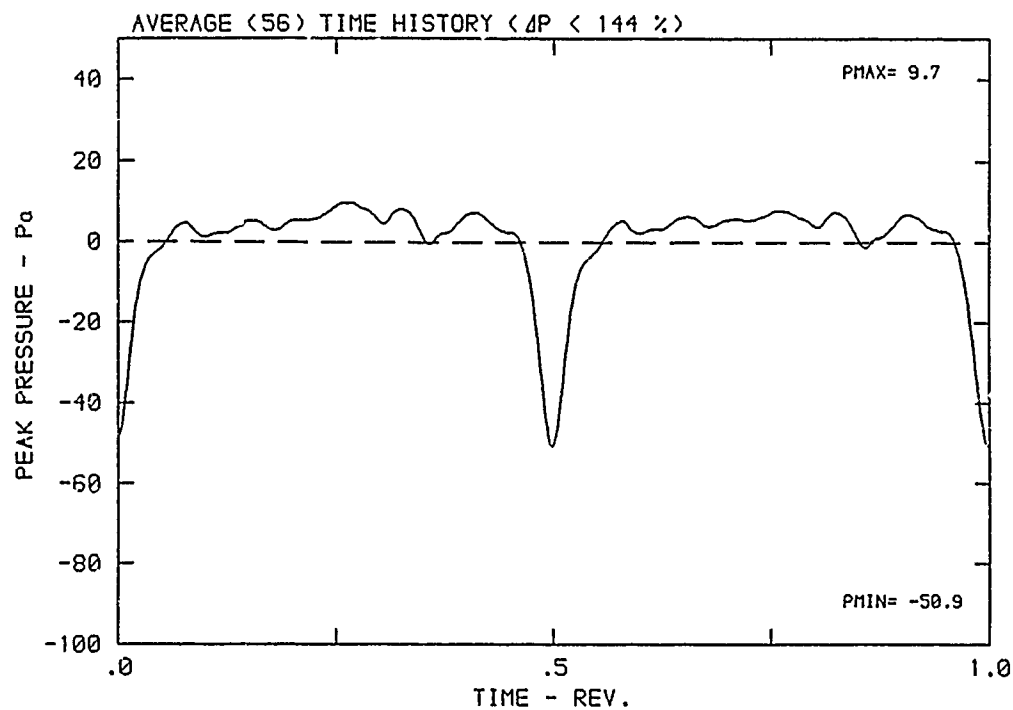
DATA POINT: BN-6 RUN: 51 MP: 1

$\beta$ : 19.9° MH: .8758 n: 2700 rpm  $v/u$ : .269  $\phi$ : .0° T: 287.0 K



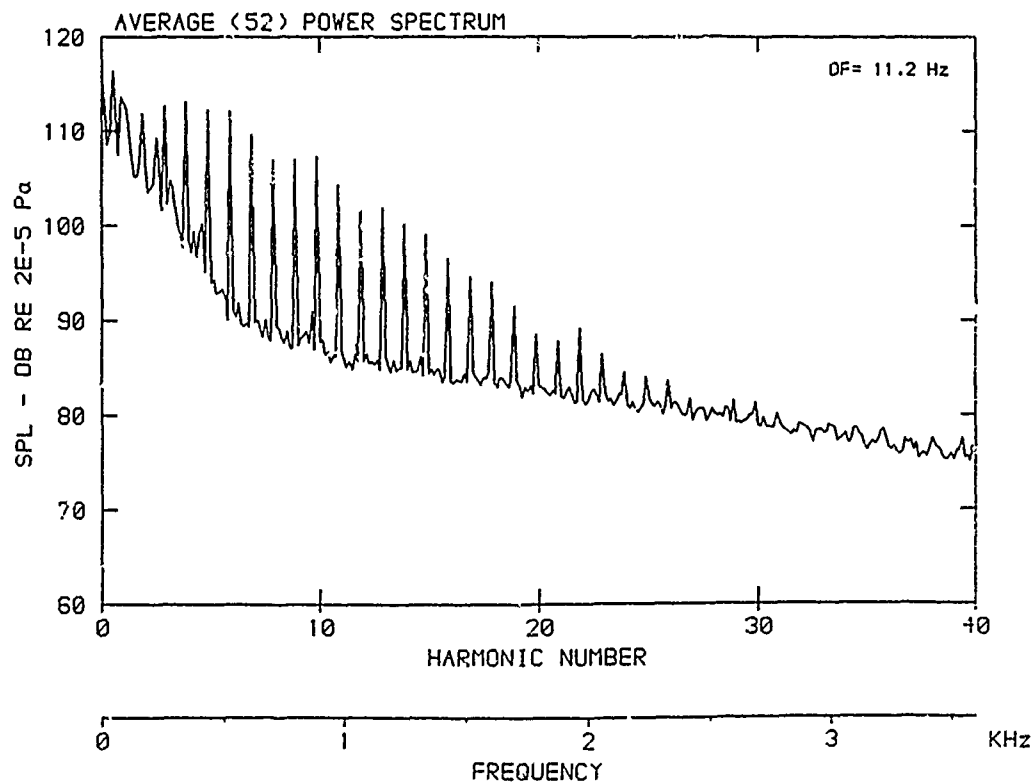
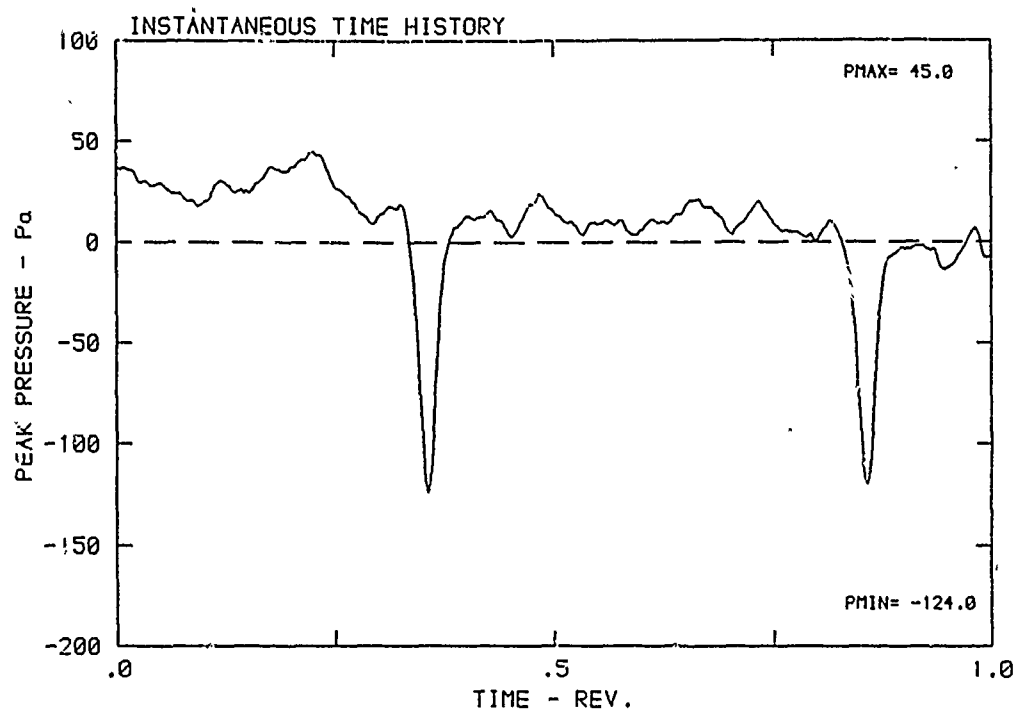
DATA POINT: BN-6      RUN: 51      MP: 1

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm    v/u: .269     $\phi$ : .0°    T: 287.0 K



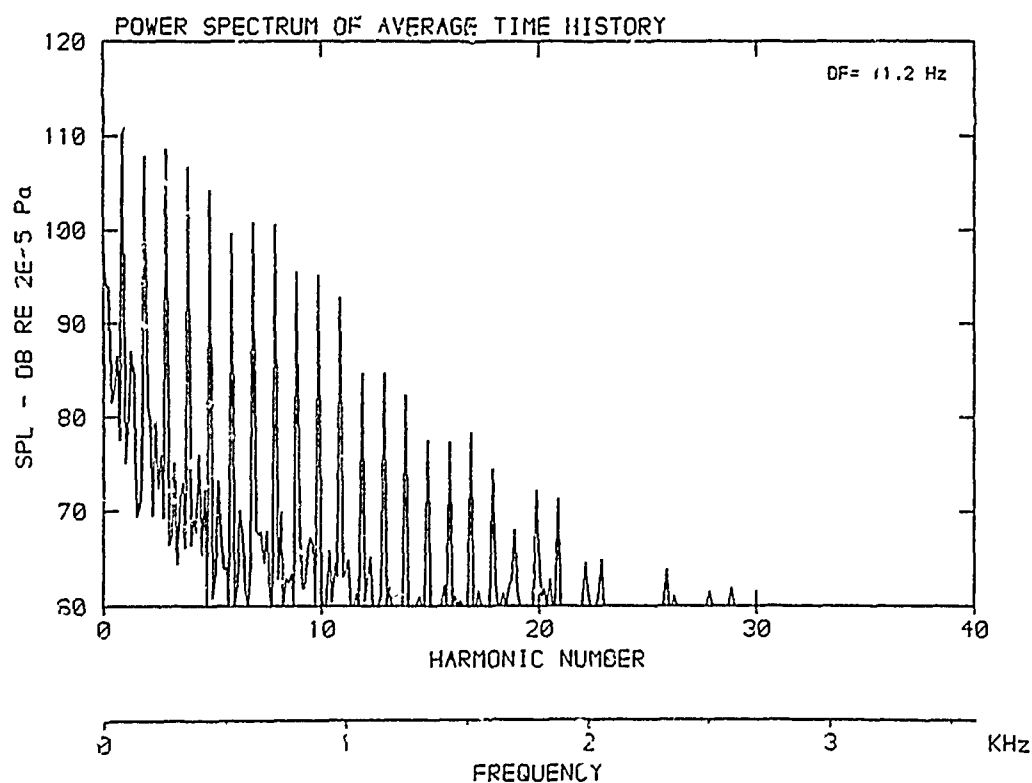
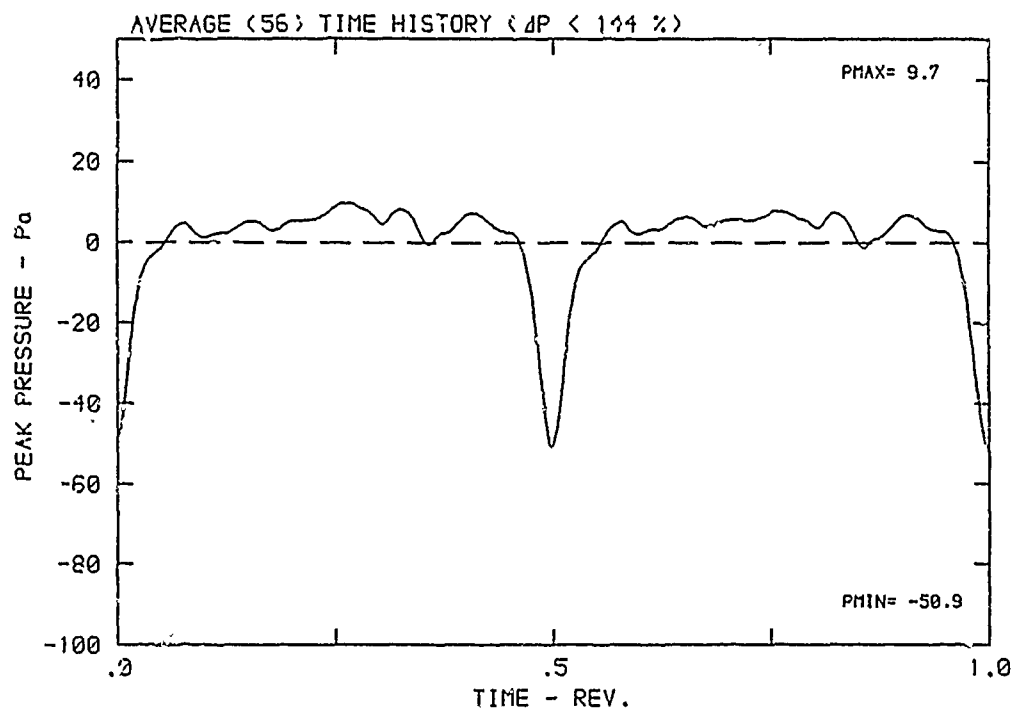
DATA POINT: BN-6 RUN: 51 MP: 2

$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K



DATA POINT: BN-6 RUN: 51 MP: 1

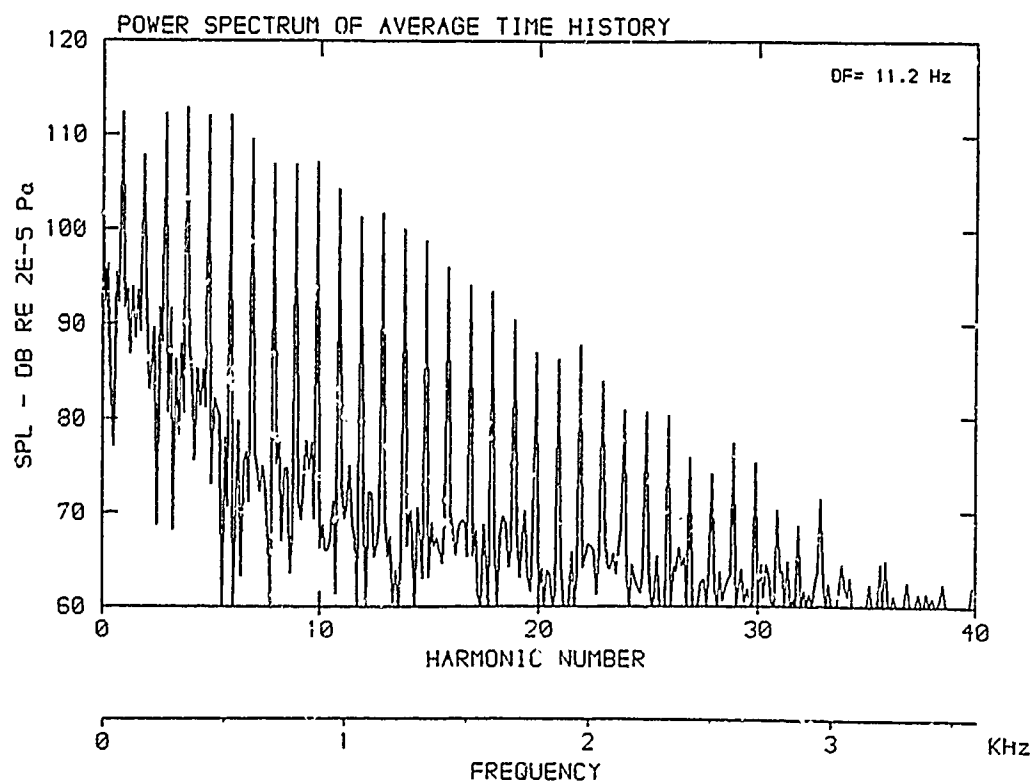
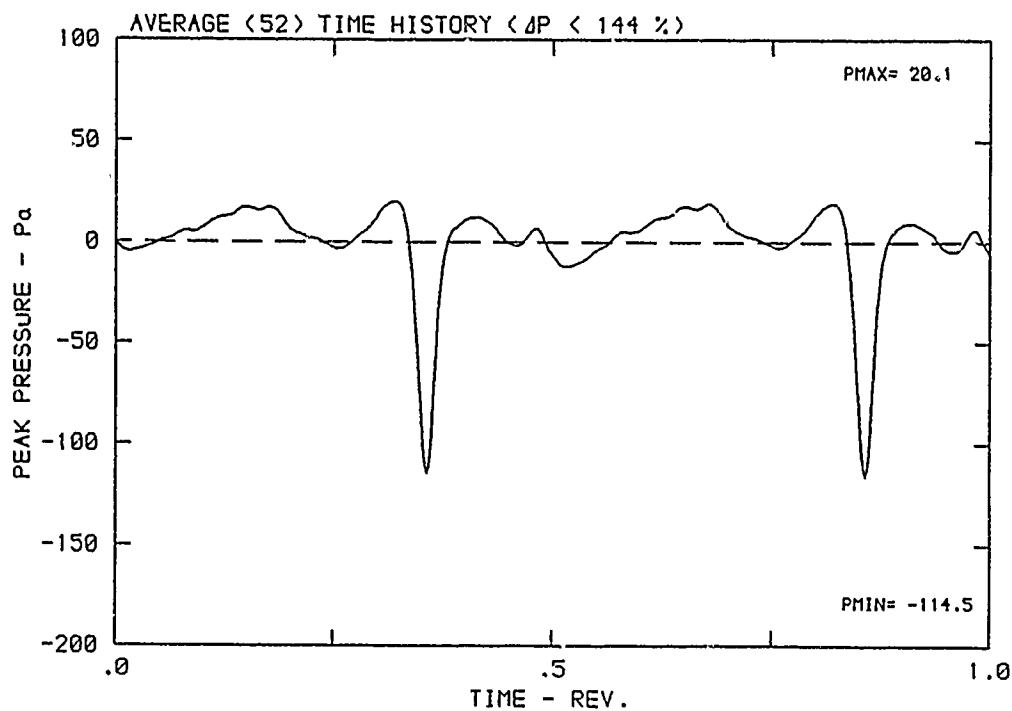
$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K





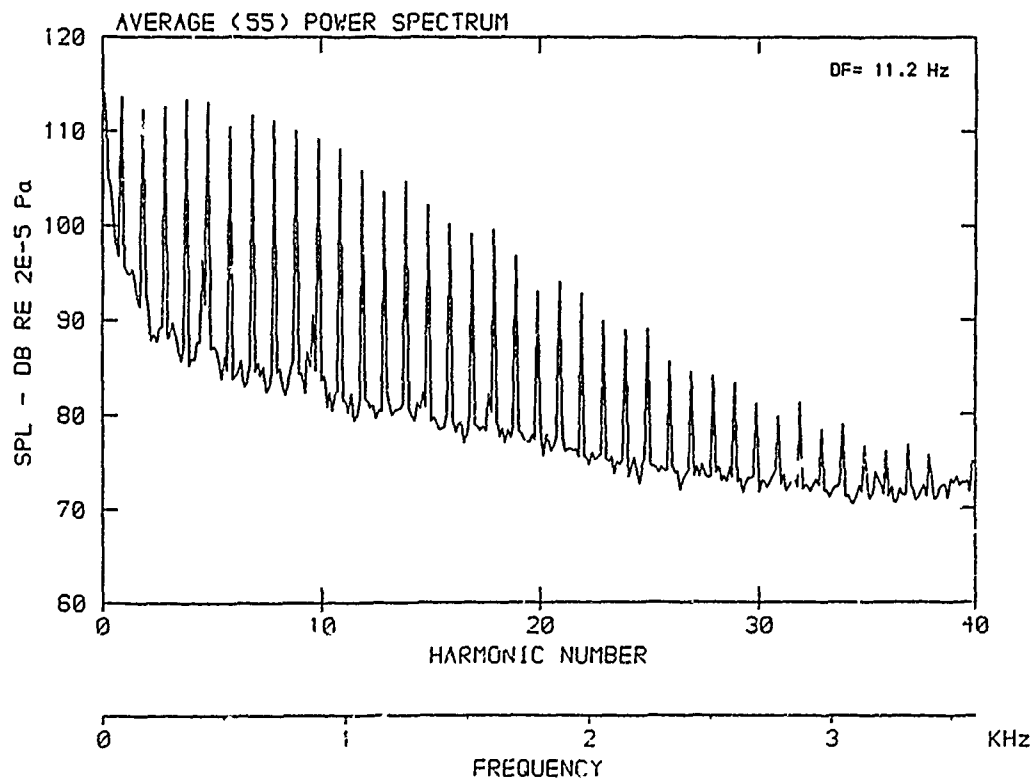
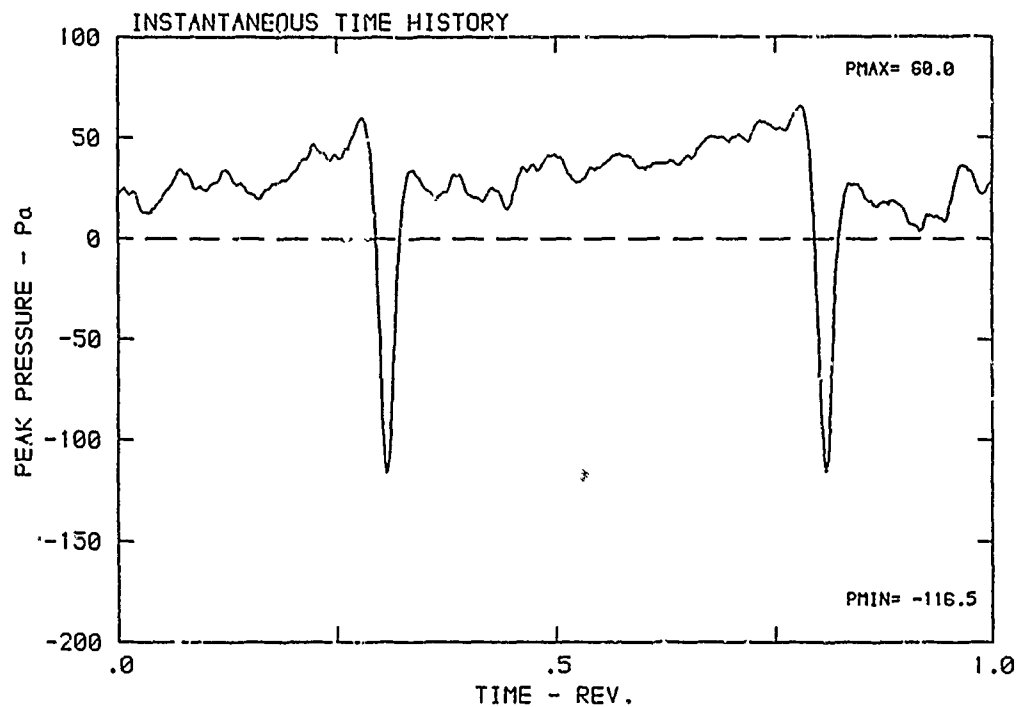
DATA POINT: BN-6      RUN: 51      MP: 2

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm    v/u: .269     $\phi$ : .0°    T: 287.0 K



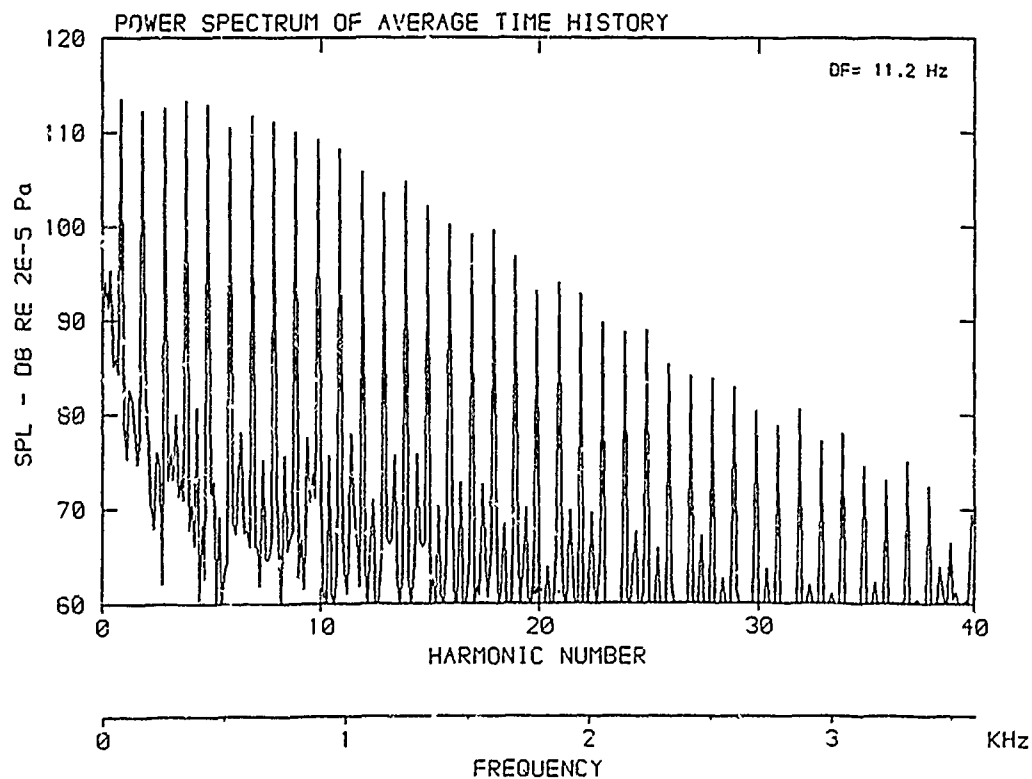
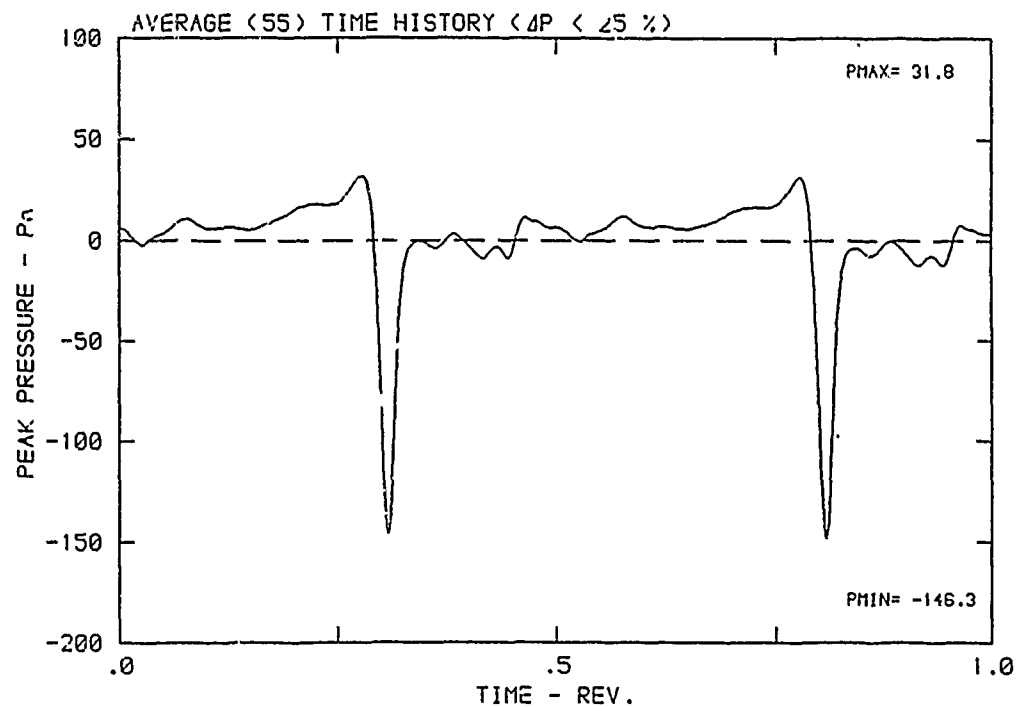
DATA POINT: BN-6    RUN: 51    MP: 3

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm    v/u: .269     $\phi$ : .0°    T: 287.0 K



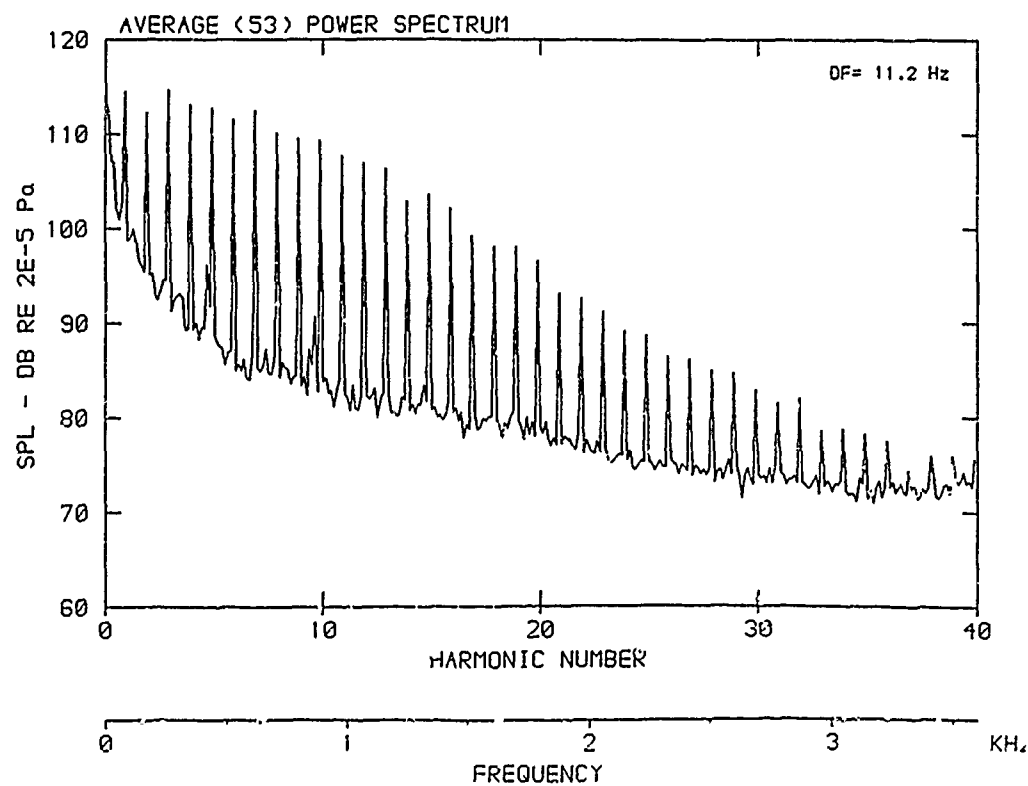
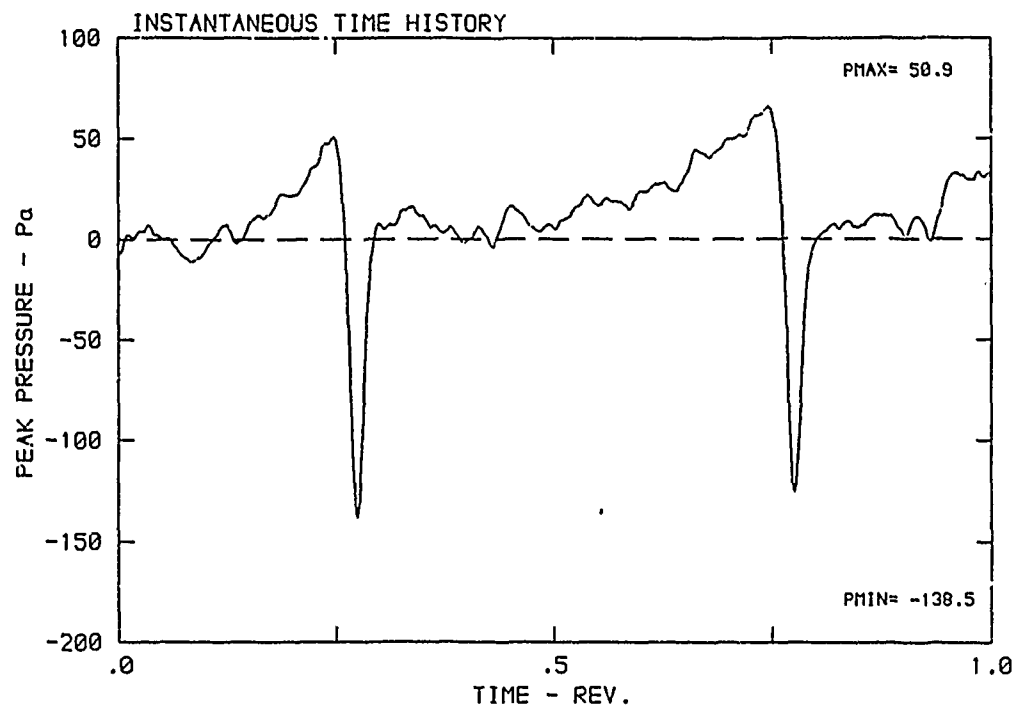
DATA POINT: BN-6    RUN: 51    MP: 3

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm    v/u: .269     $\phi$ : .0°    T: 287.0 K



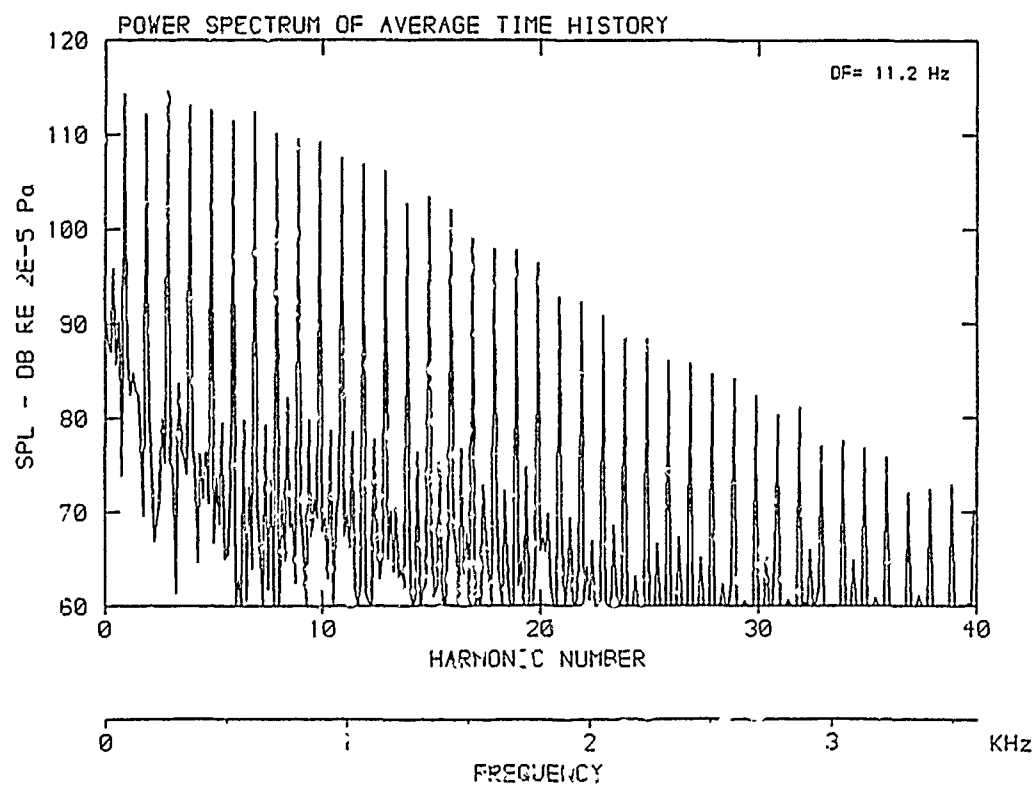
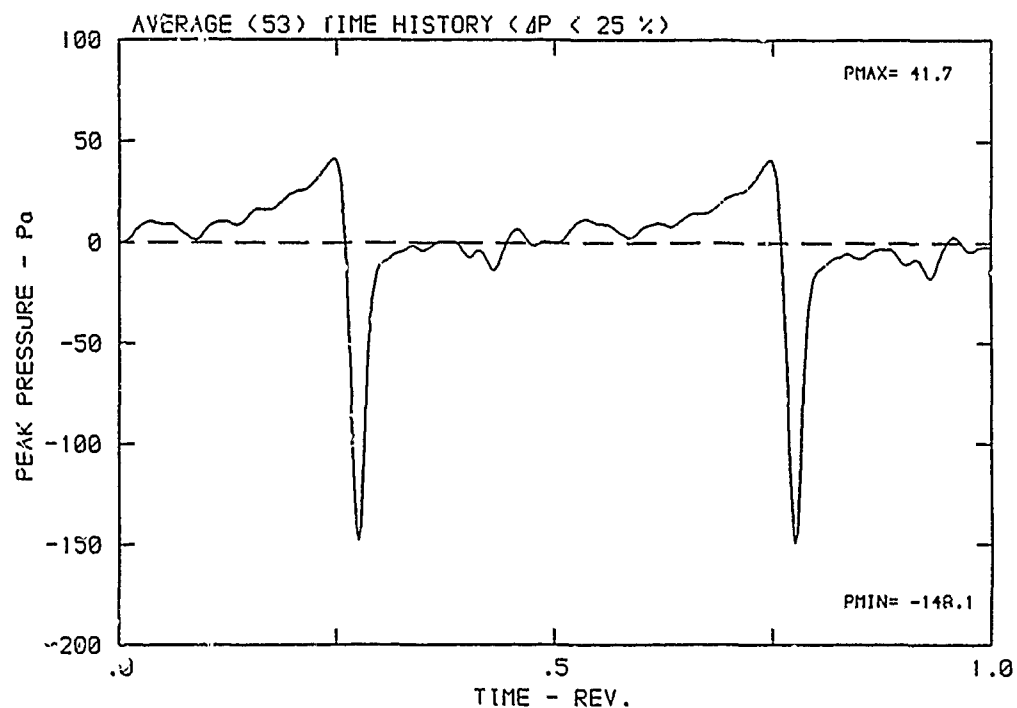
DATA POINT: BN-6 RUN: 51 MP: 4

$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K



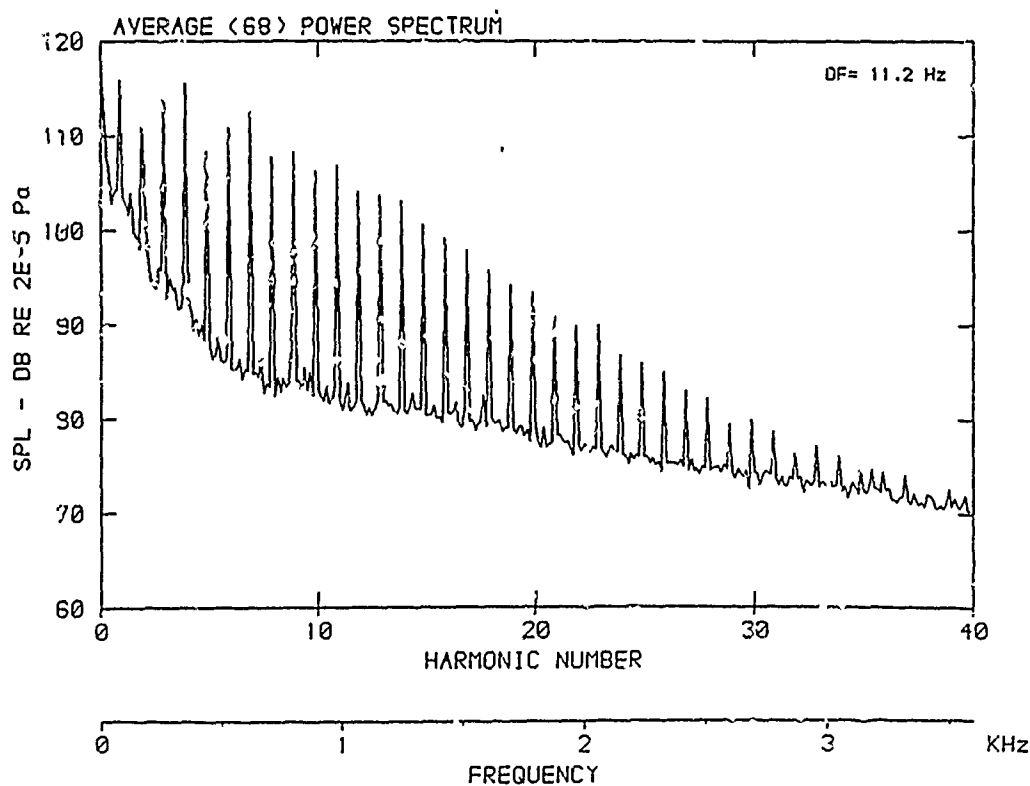
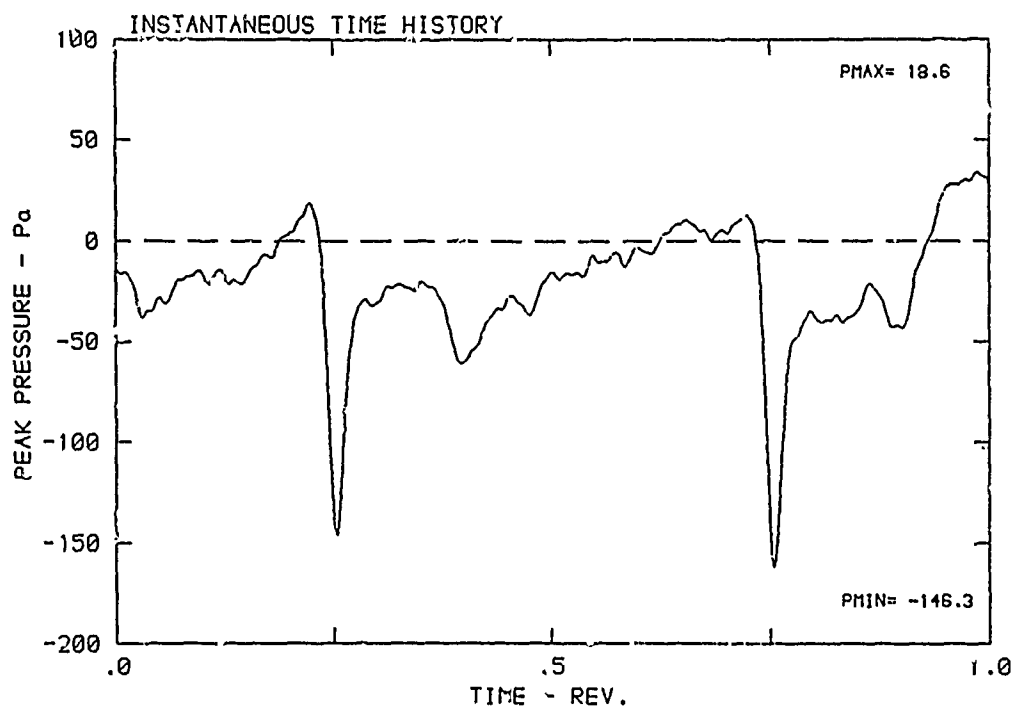
DATA POINT: BN-6 RUN: 51 MP: 4

$\beta$ : 19.9°  $M_t$ : .8758  $n$ : 2700 rpm  $v/u$ : .269  $\phi$ : .0°  $T$ : 287.0 K



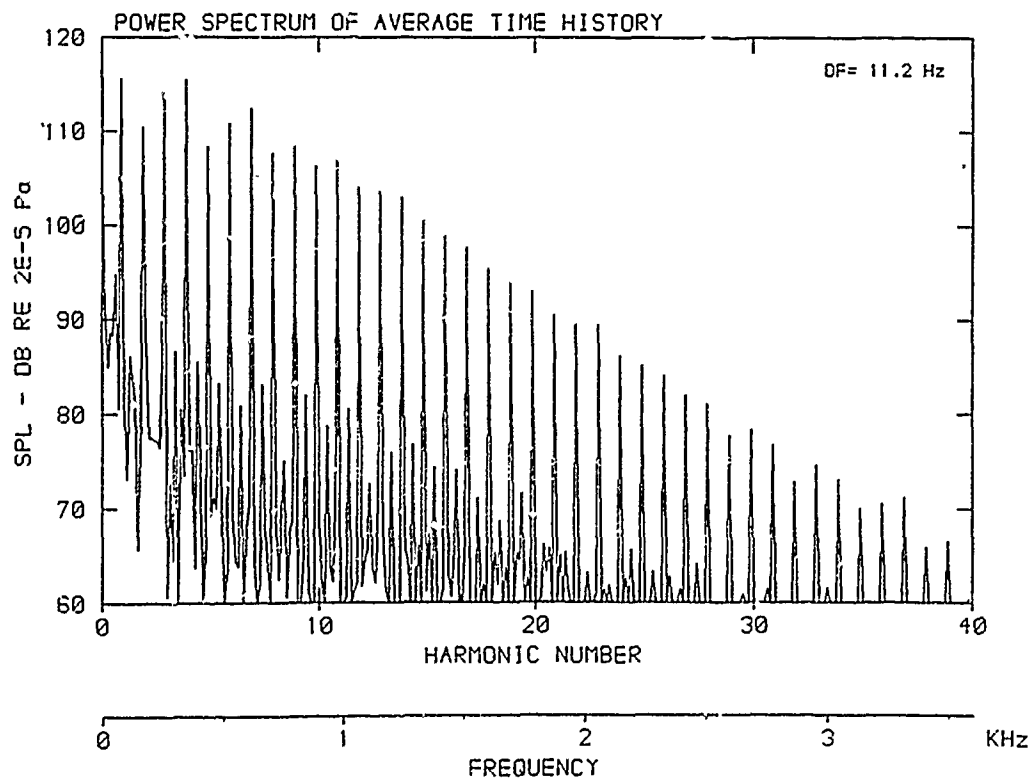
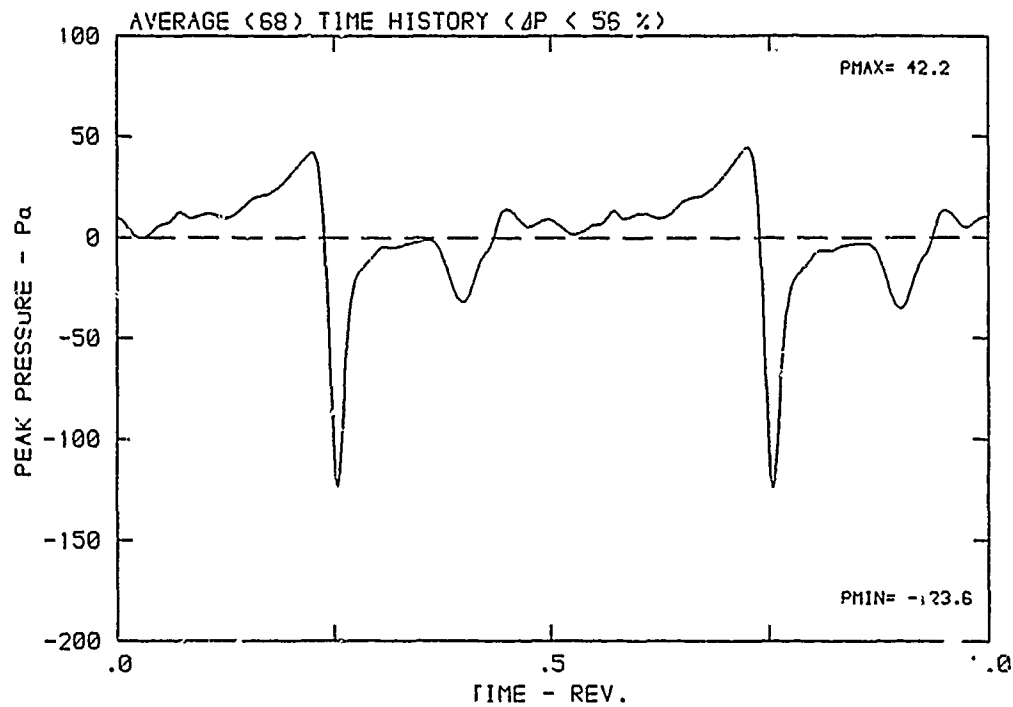
DATA POINT: BN-6 RUN: 51 MP: 5

$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .2E9  $\phi$ : .0° T: 287.0 K



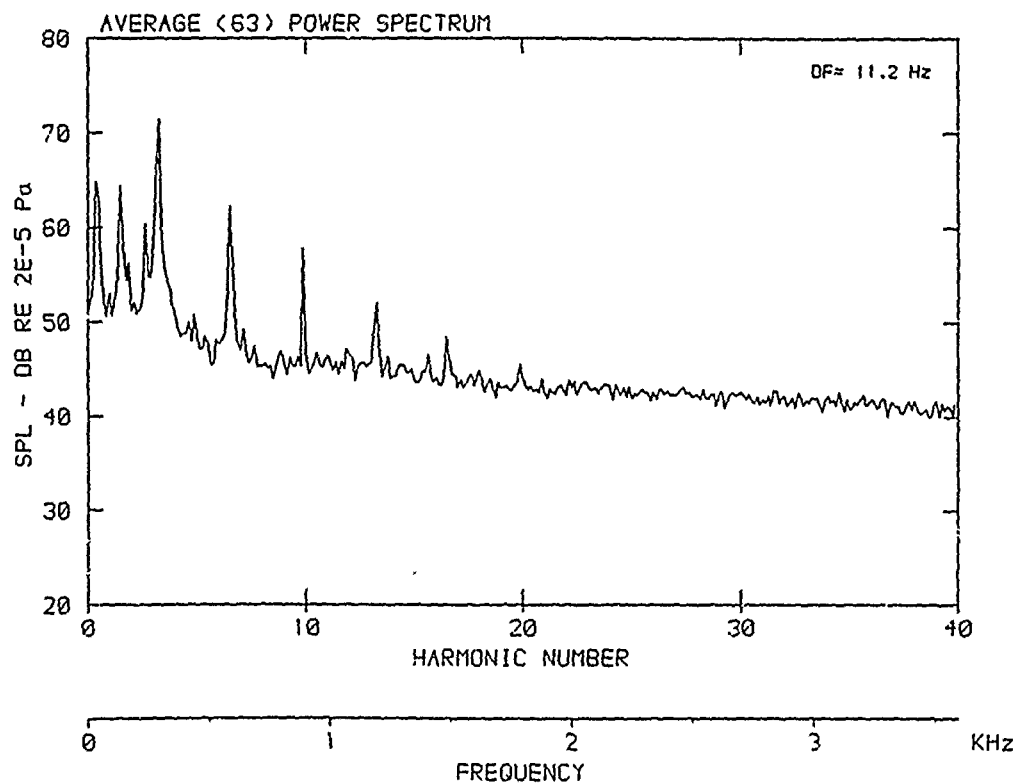
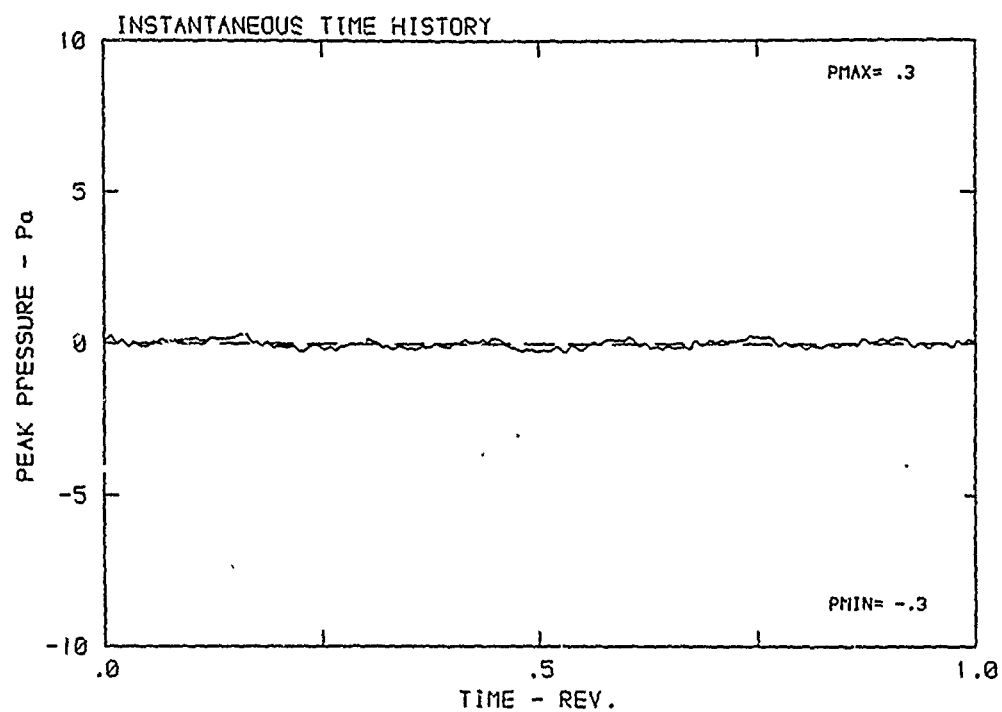
DATA POINT: BN-6 RUN: 51 MP: 5

$\beta$ : 19.9° MH: .8758 n: 2700 rpm  $v/u$ : .269  $\phi$ : .0° T: 287.0 K



DATA POINT: BN-6 RUN: 51 MP: 6

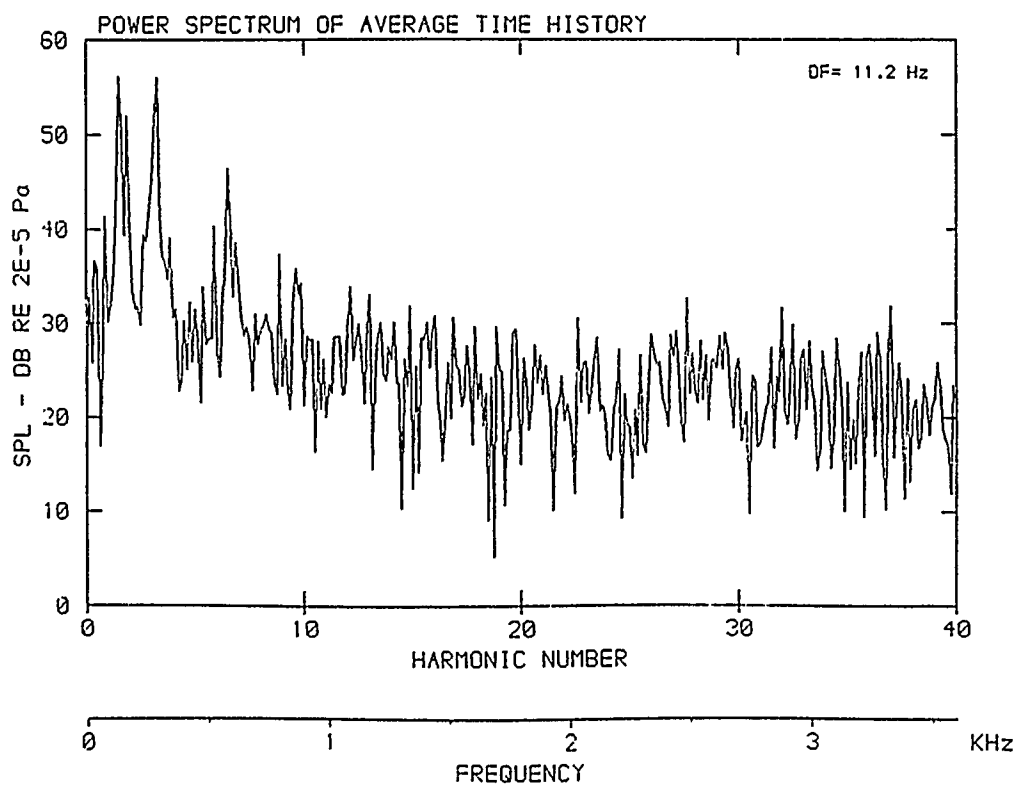
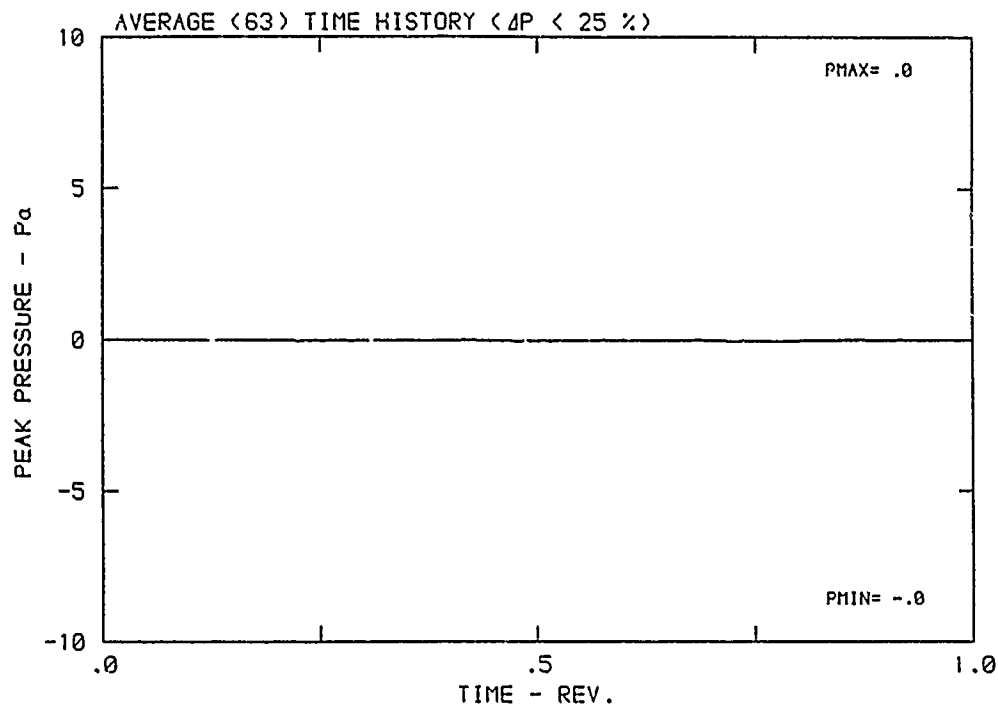
$\beta$ : 19.9° MH: .8758 n: 2700 rpm  $v/u$ : .269  $\phi$ : .0° T: 287.0 K





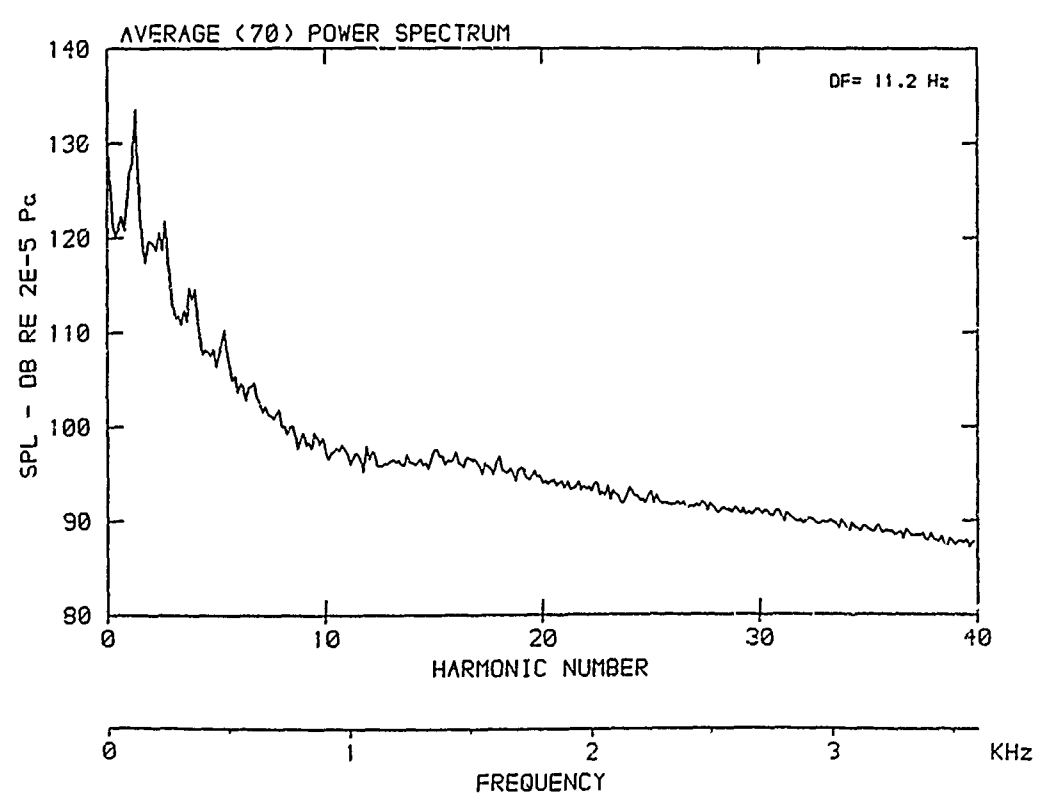
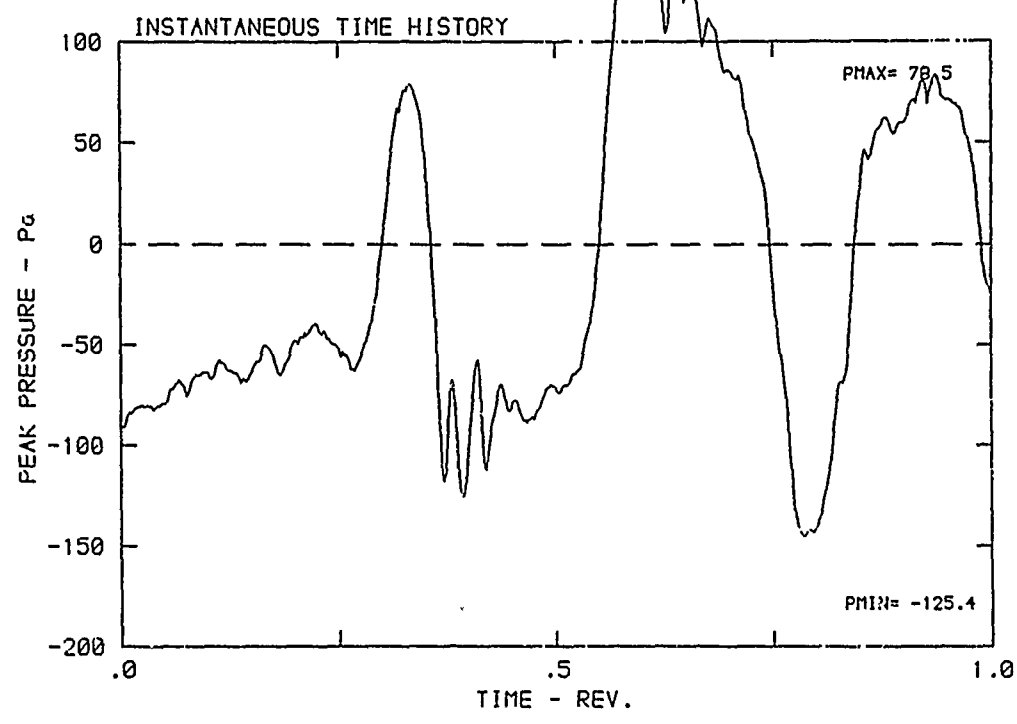
DATA POINT: BN-6      RUN: 51      MP: 6

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm    v/u: .269     $\phi$ : .0°    T: 287.0 K



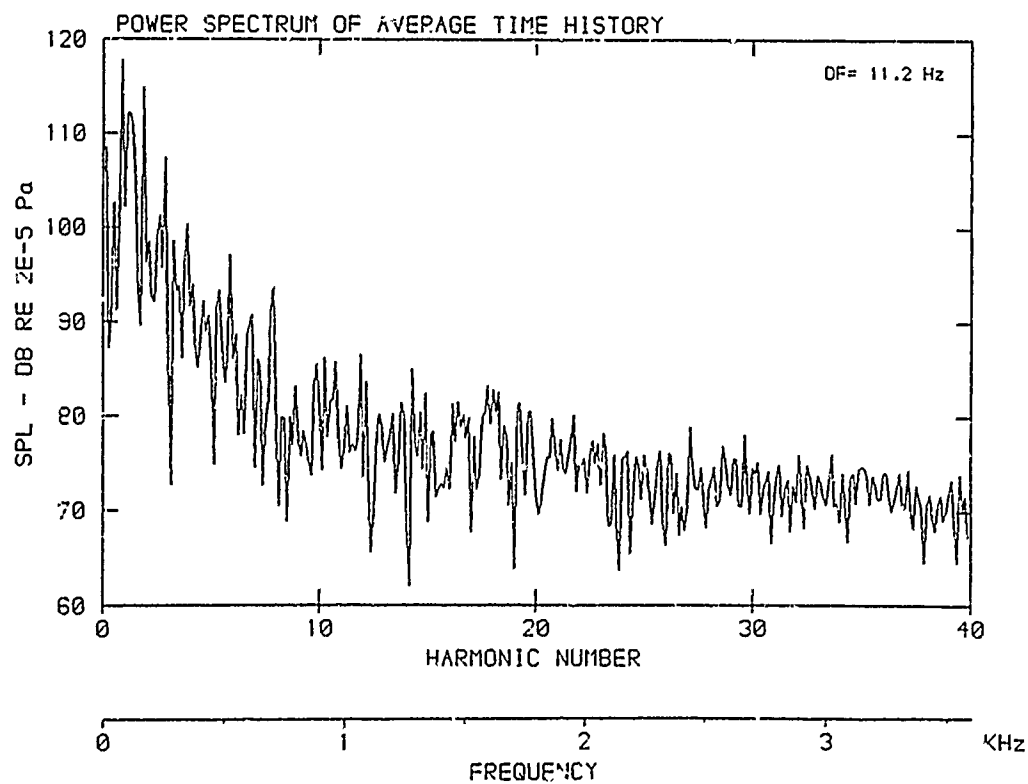
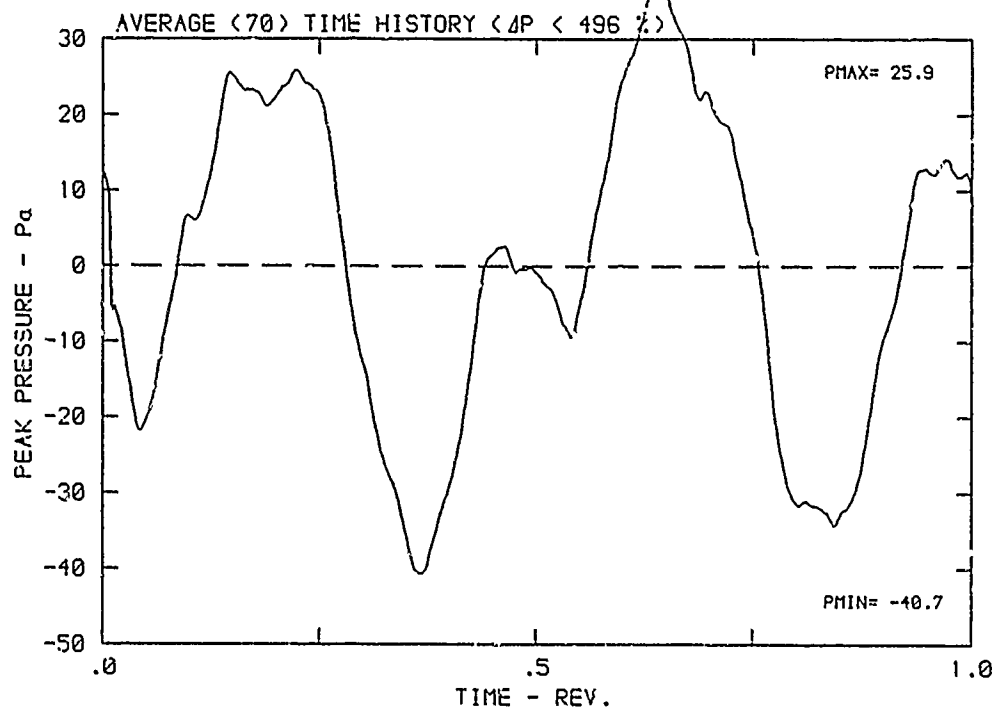
DATA POINT: BN-6    RUN: 51    MP: 7

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm     $v/u$ : .269     $\phi$ : .0°    T: 287.0 K



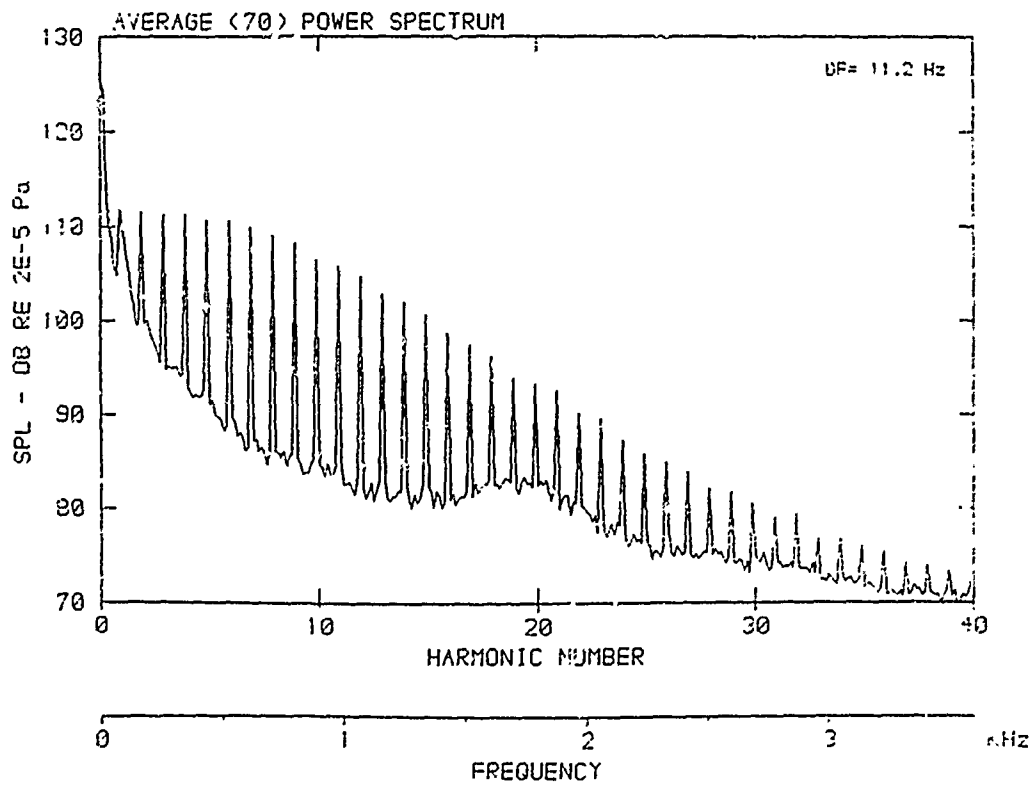
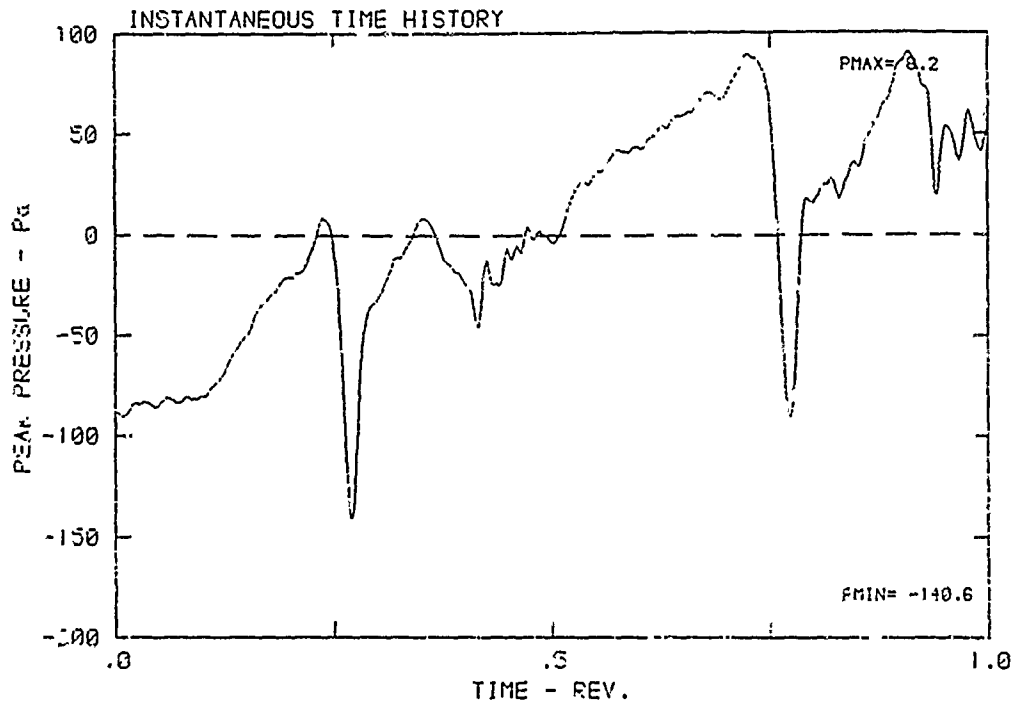
DATA POINT: BN-6 RUN: 51 MP: 7

$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K



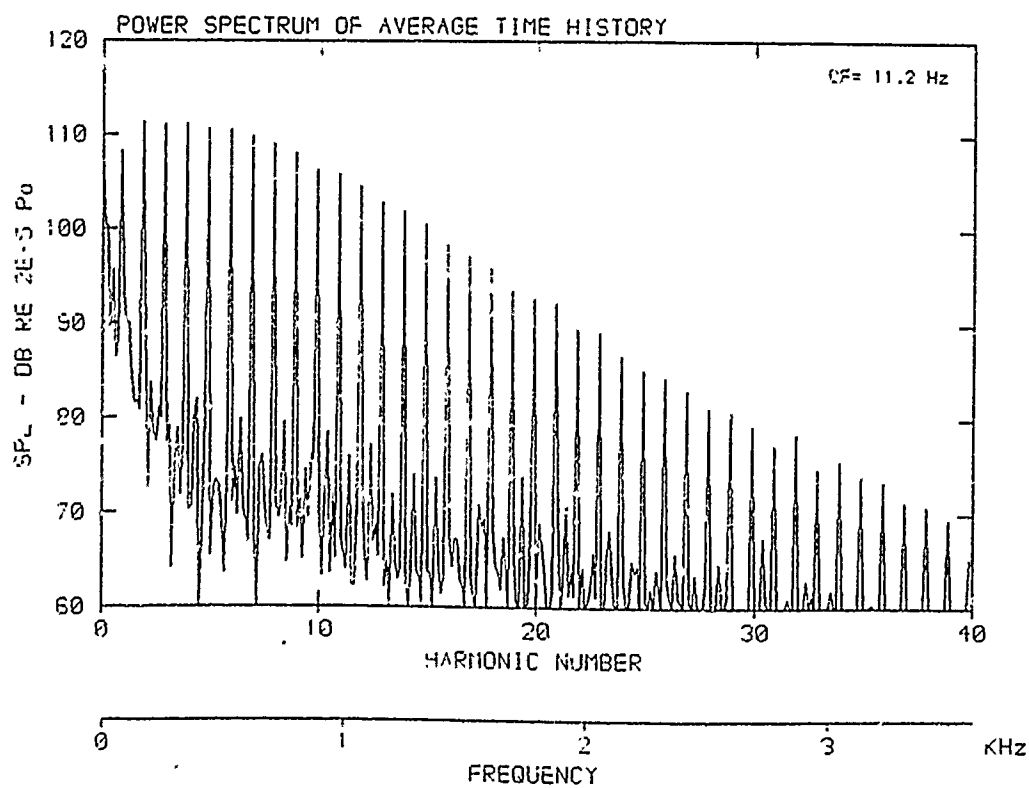
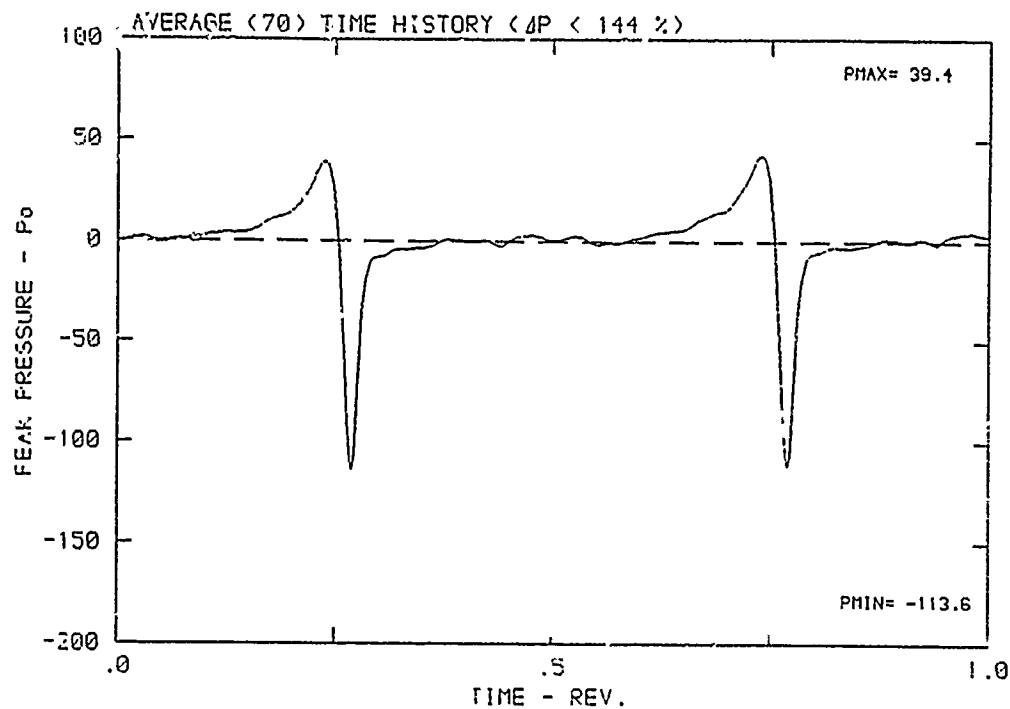
DATA POINT: BN-6 RUN: 51 MP: 8

$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K



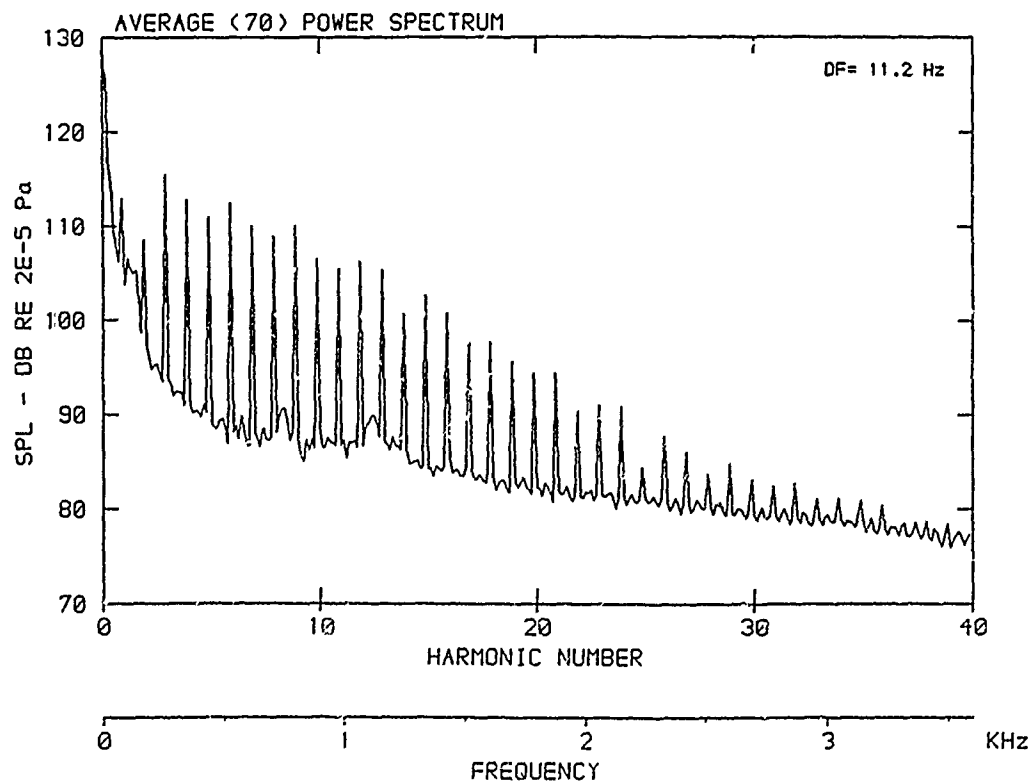
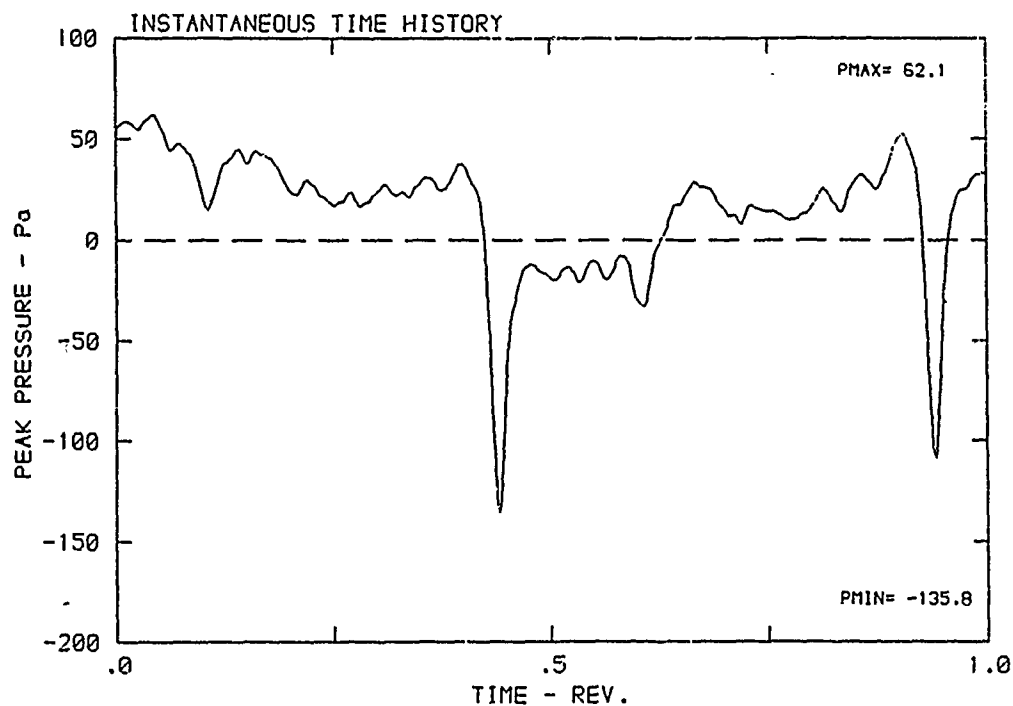
DATA POINT: BN-6      RUN: 51      MP: 8

$\beta$ : 19.9°    MH: .8758    n: 2700 rpm    v/u: .269     $\phi$ : .0°    T: 287.0 K



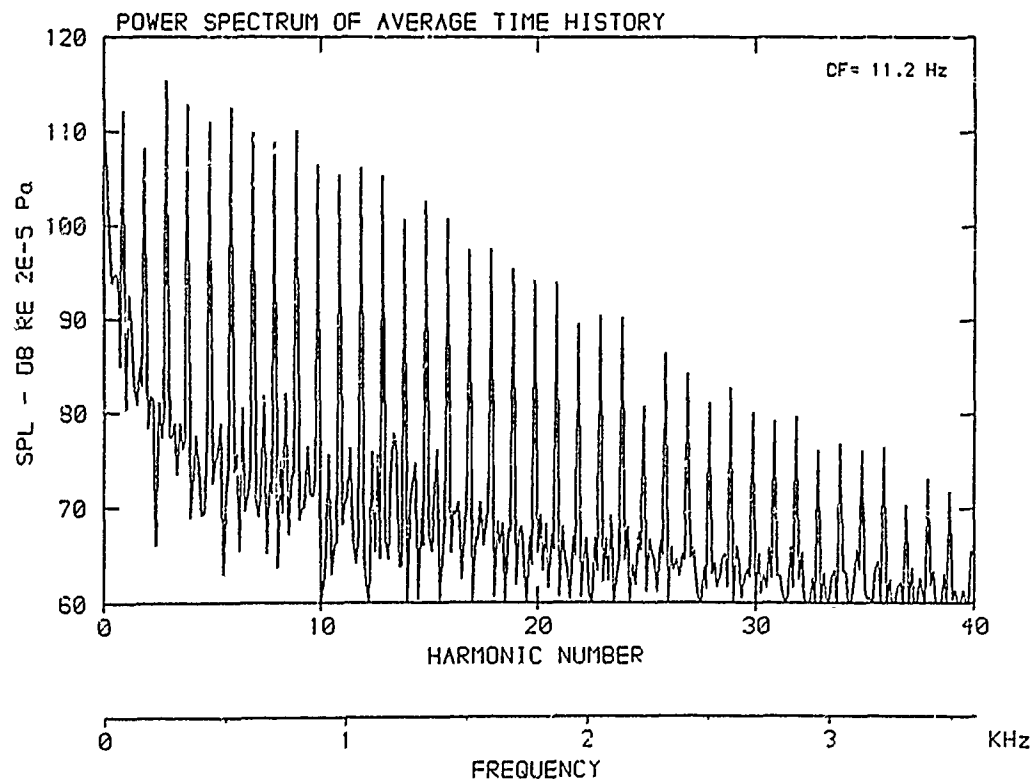
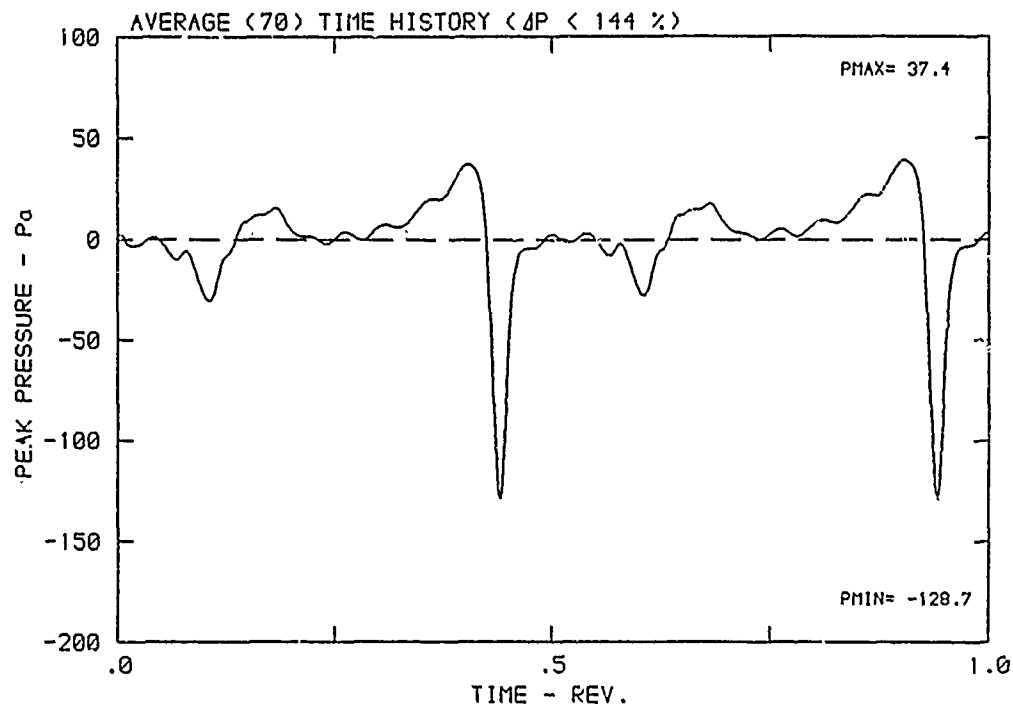
DATA POINT: BN-6 RUN: 51 MP: 9

$\beta$ : 19.9° MH: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K



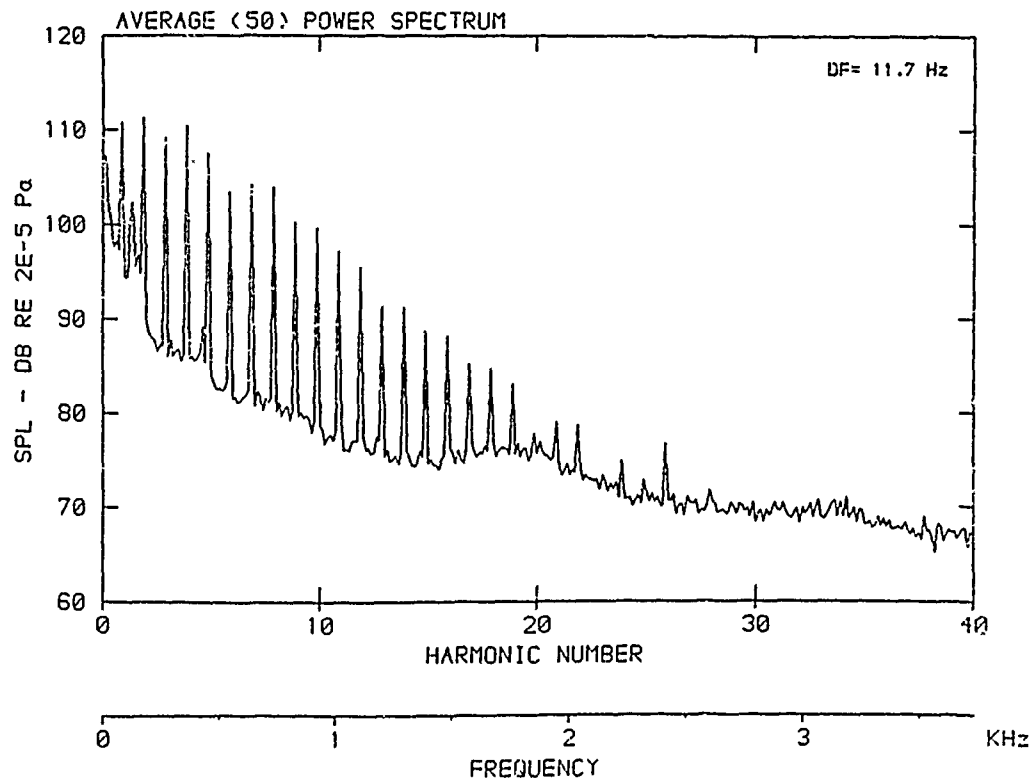
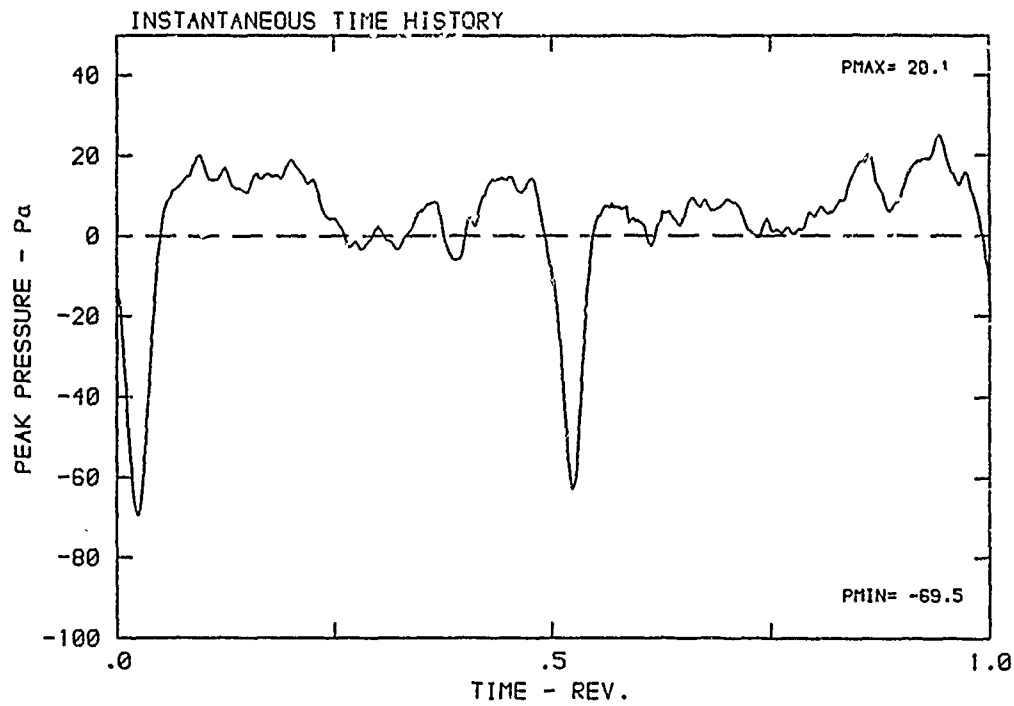
DATA POINT: BN-6 RUN: 51 MP: 9

$\beta$ : 19.9° MR: .8758 n: 2700 rpm v/u: .269  $\phi$ : .0° T: 287.0 K



DATA POINT: BN-61 RUN: 52 MP: 1

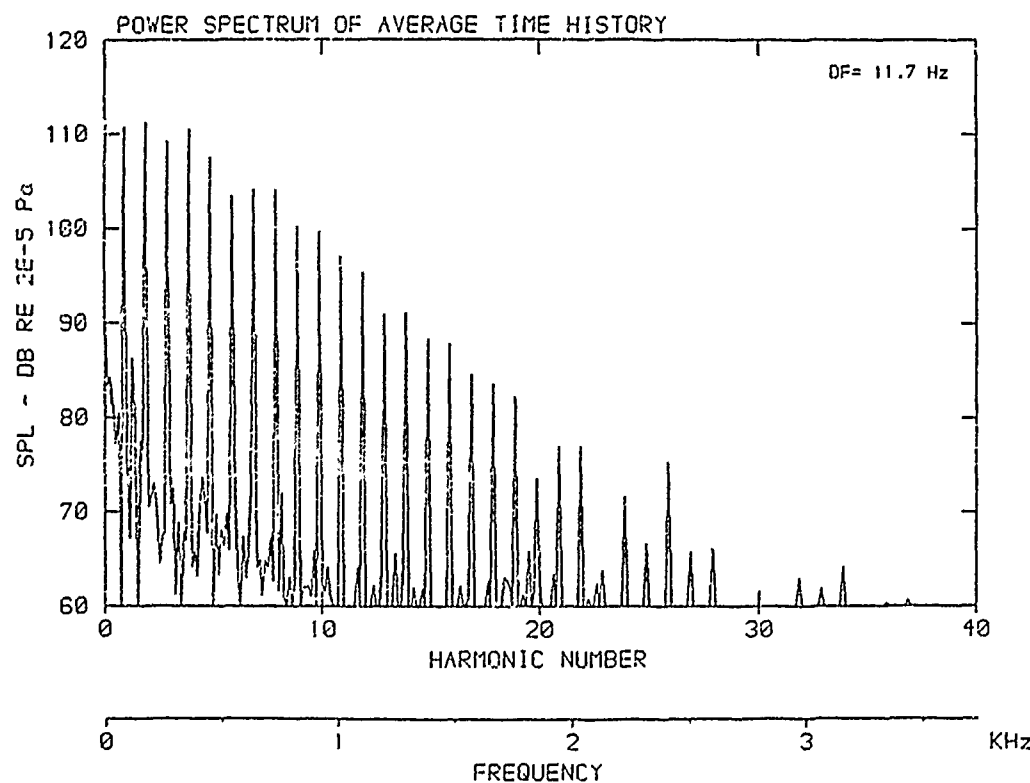
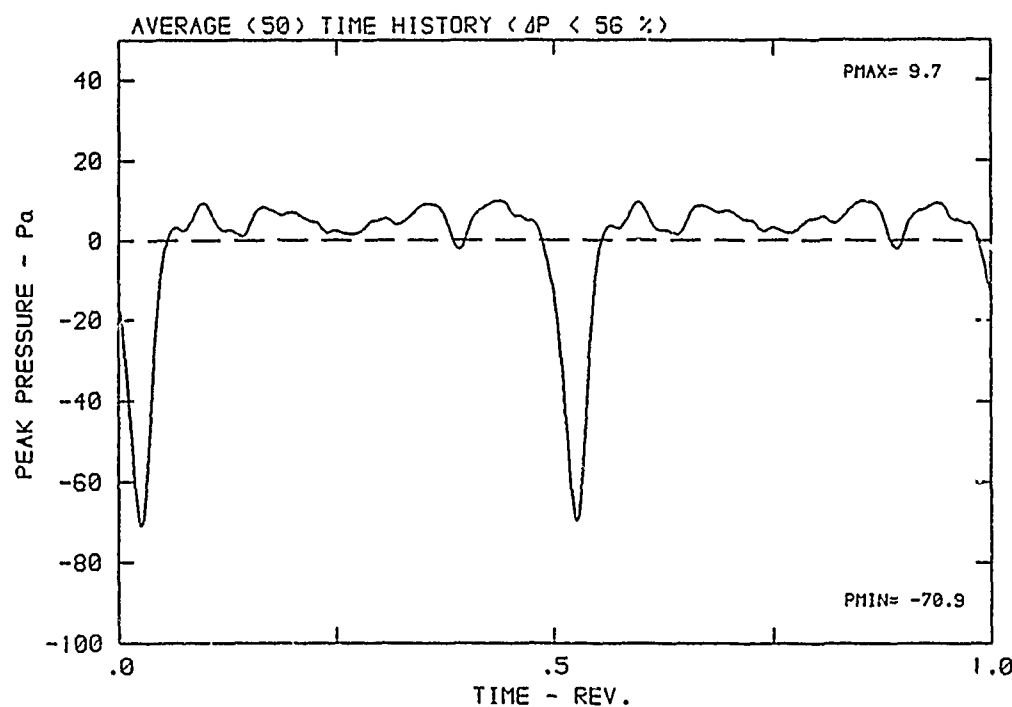
$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K





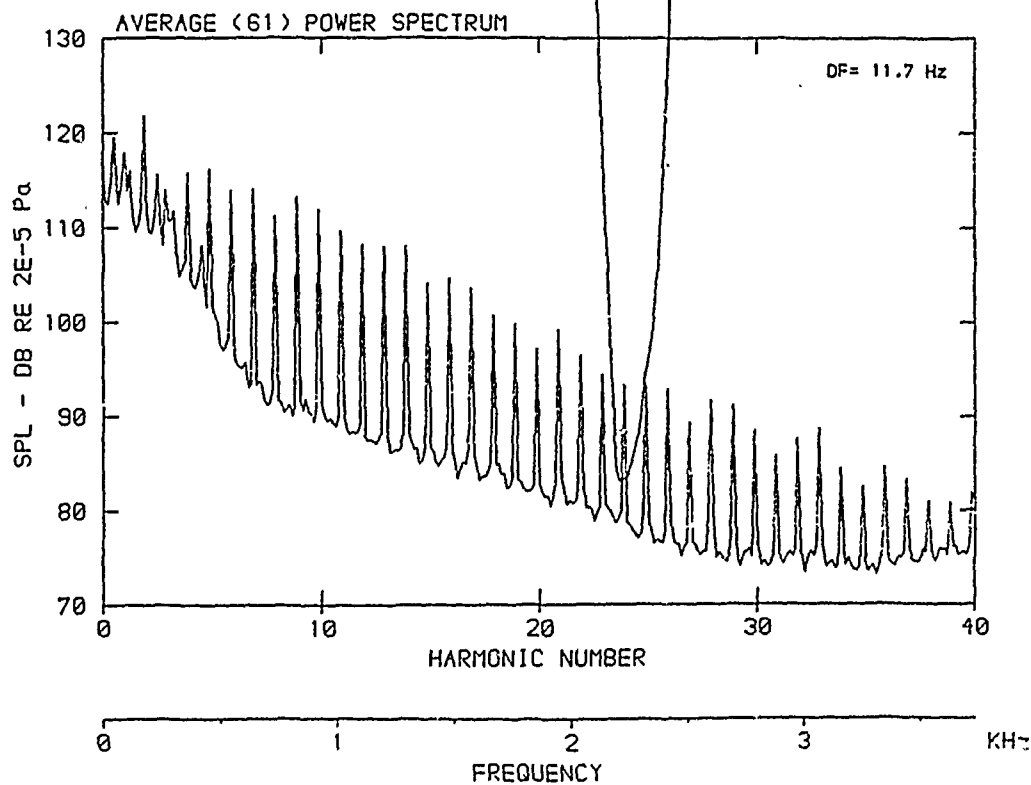
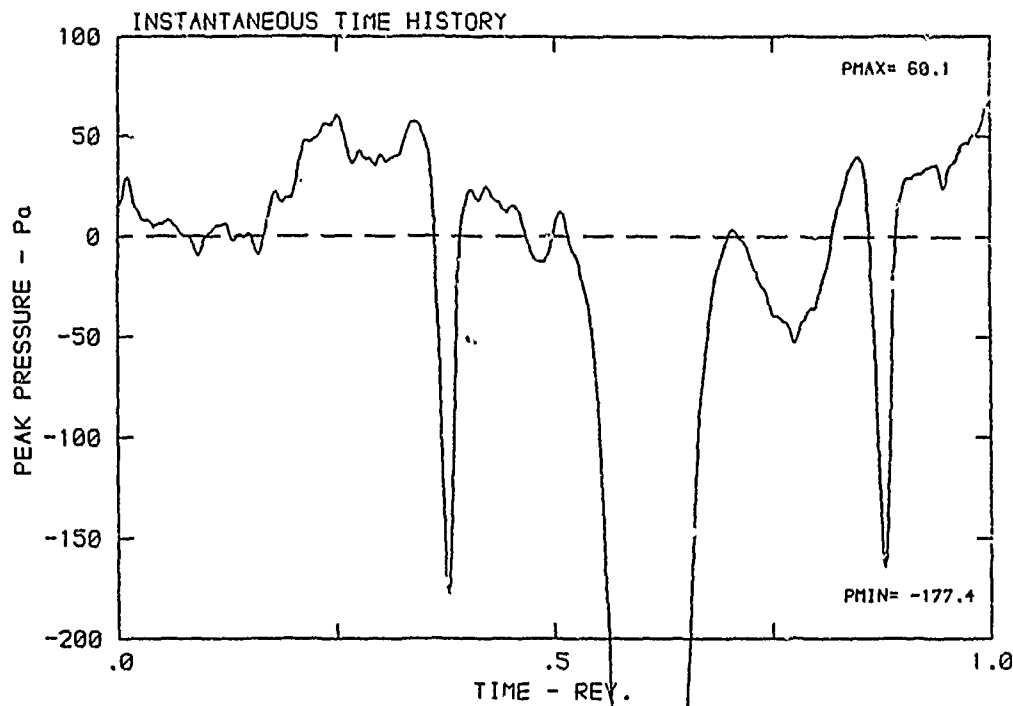
DATA POINT: BN-61 RUN: 52 MP: 1

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



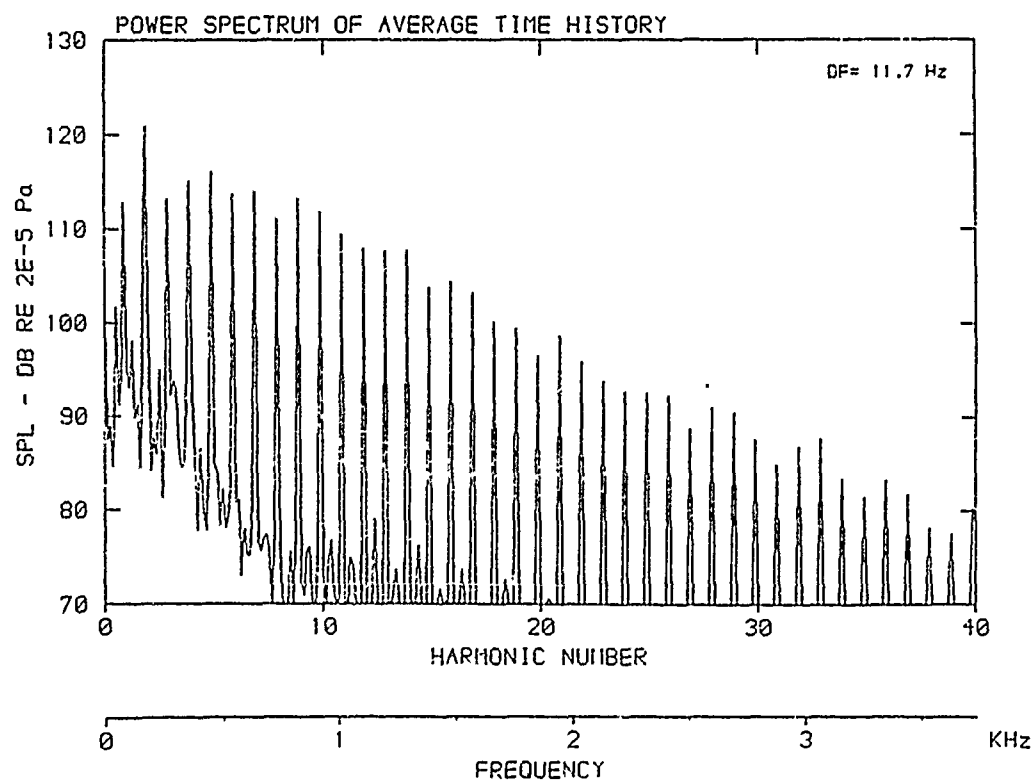
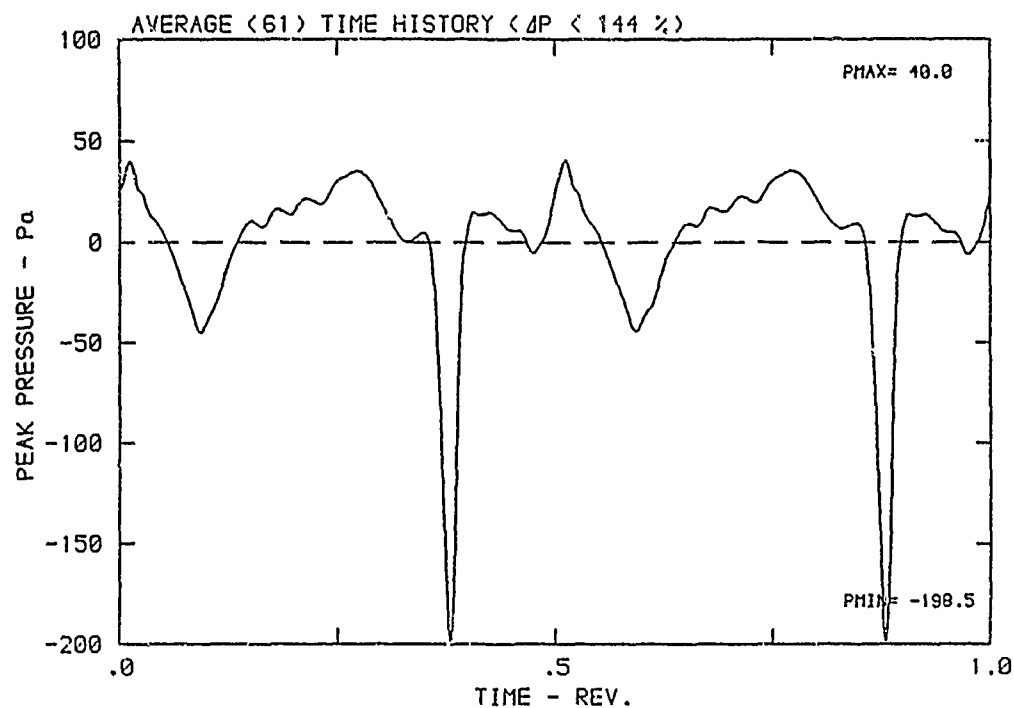
DATA POINT: BN-61 RUN: 52 MP: 2

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .253  $\phi$ : .0° T: 289.0 K



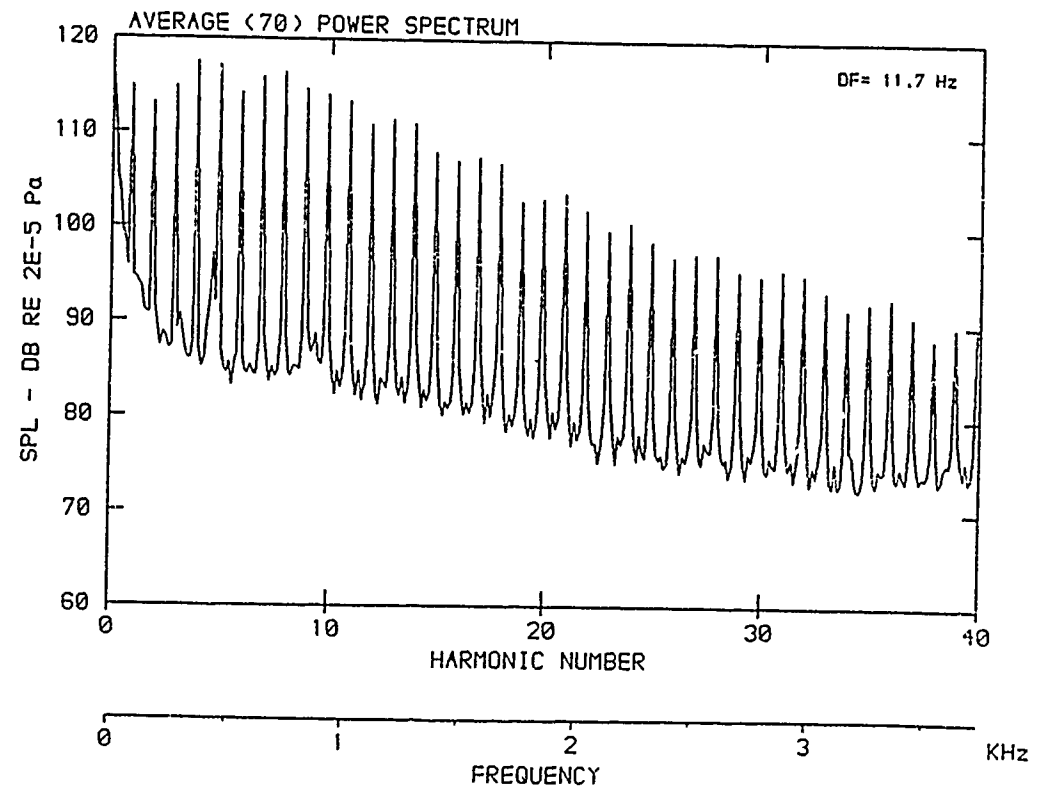
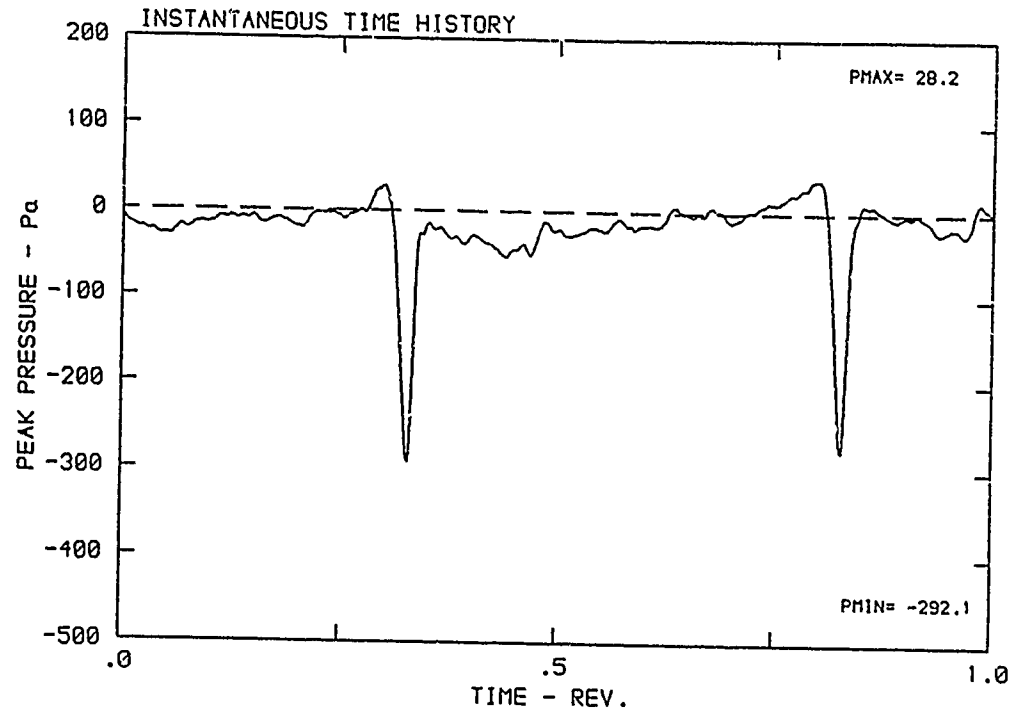
DATA POINT: BN-61 RUN: 52 MP: 2

$\beta$ : 19.9° MH: .9026 n: 2800 rpm  $v/u$ : .258  $\phi$ : .0° T: 289.0 K



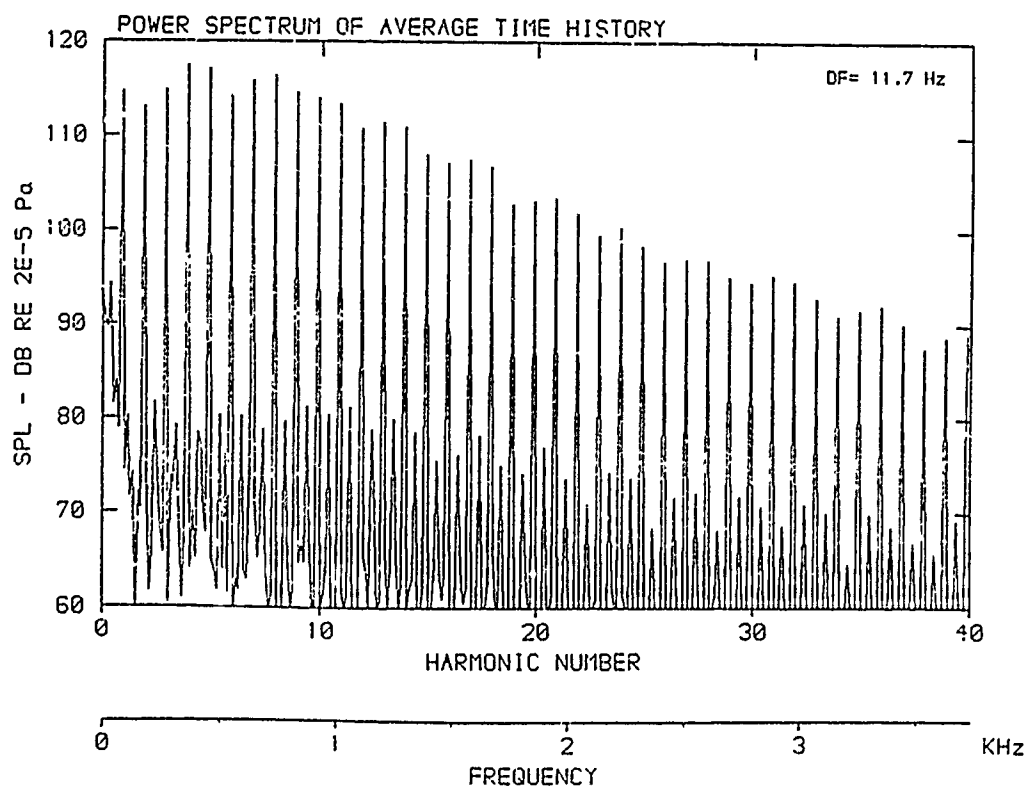
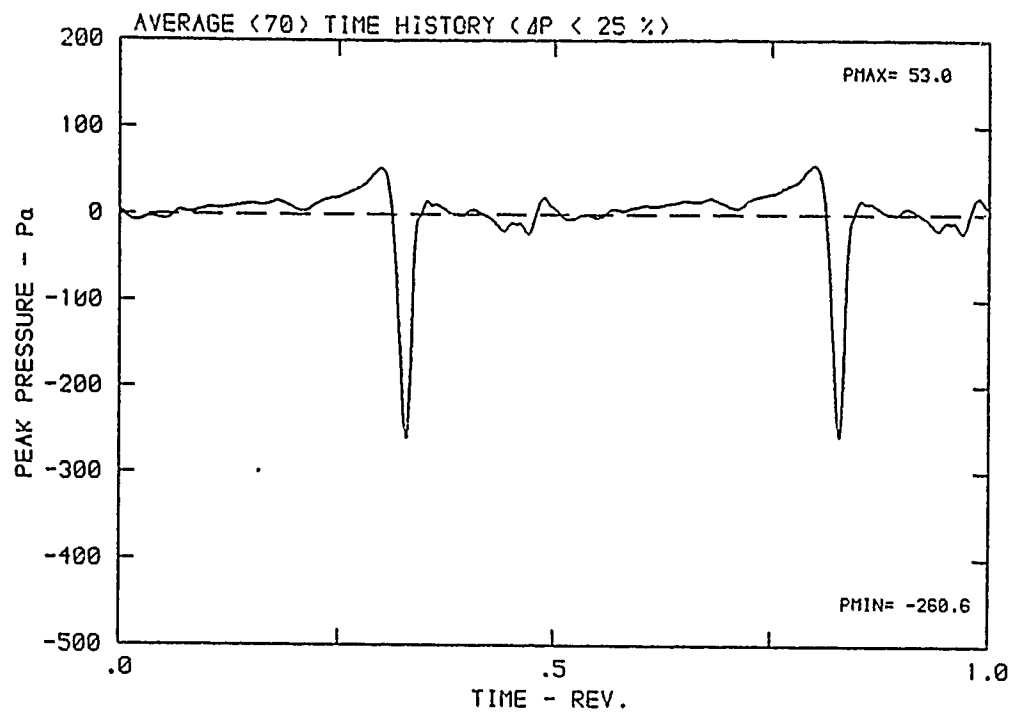
DATA POINT: BN-61 RUN: 52 MP: 3

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



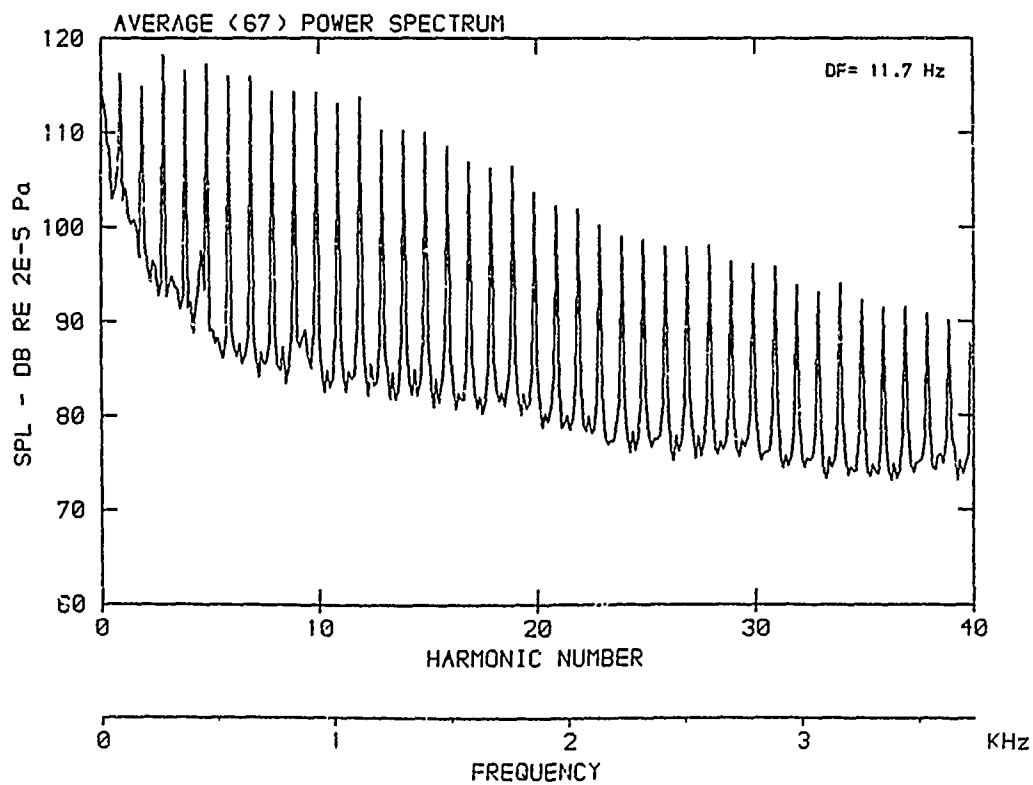
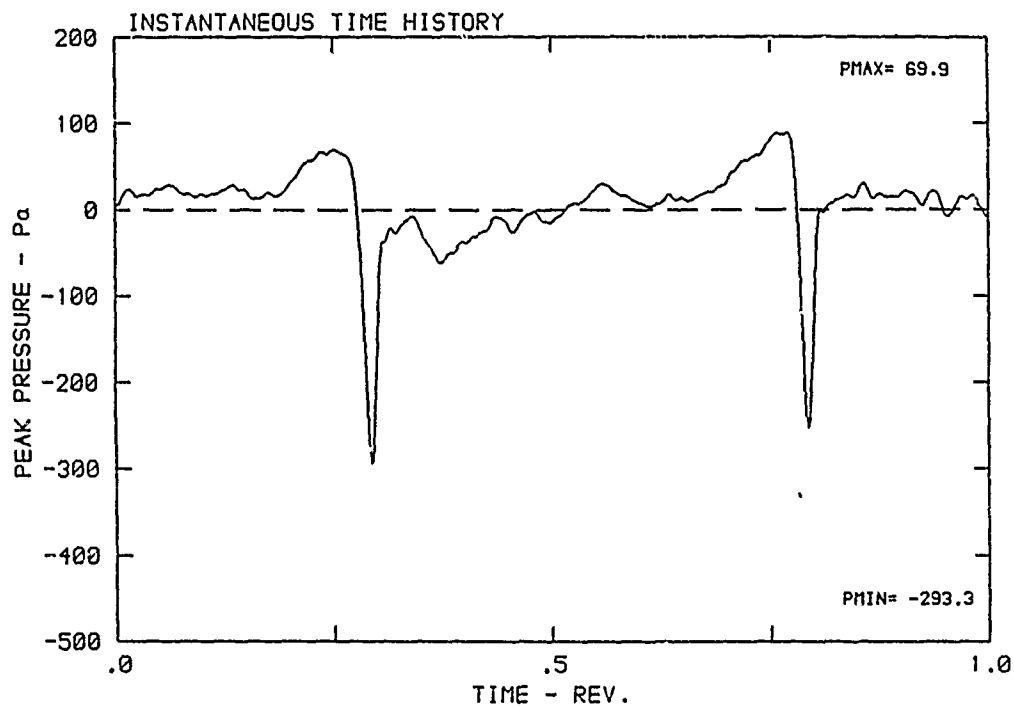
DATA POINT: BN-61 RUN: 52 MP: 3

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .6° T: 289.0 K



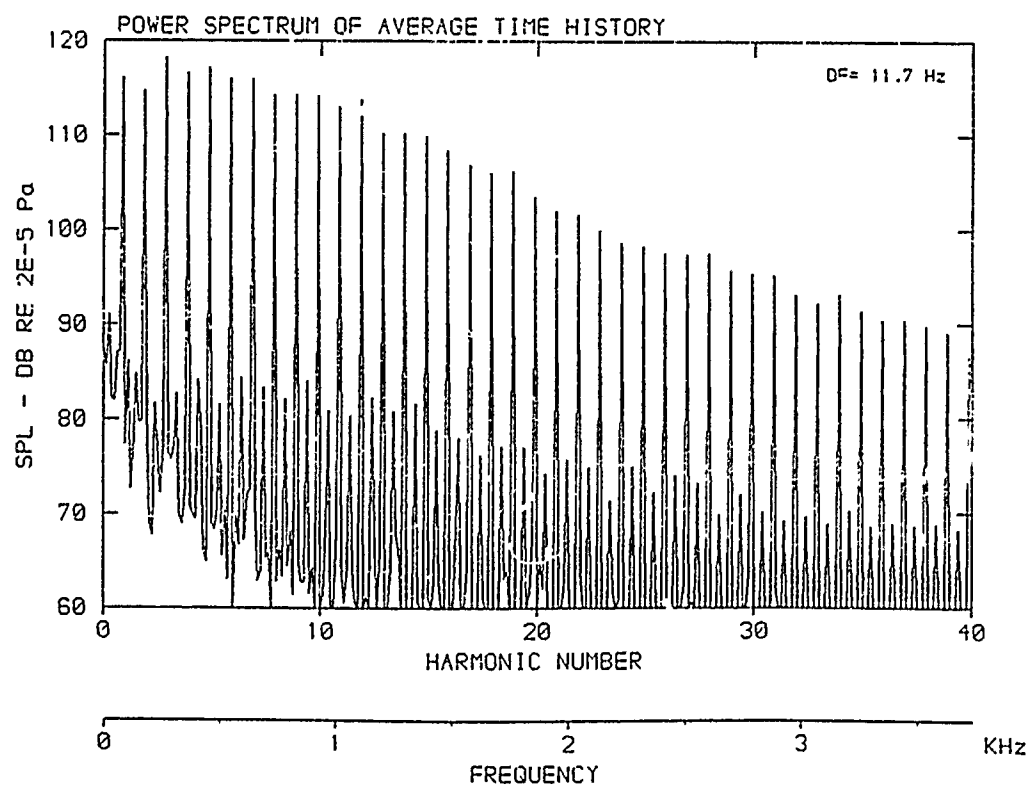
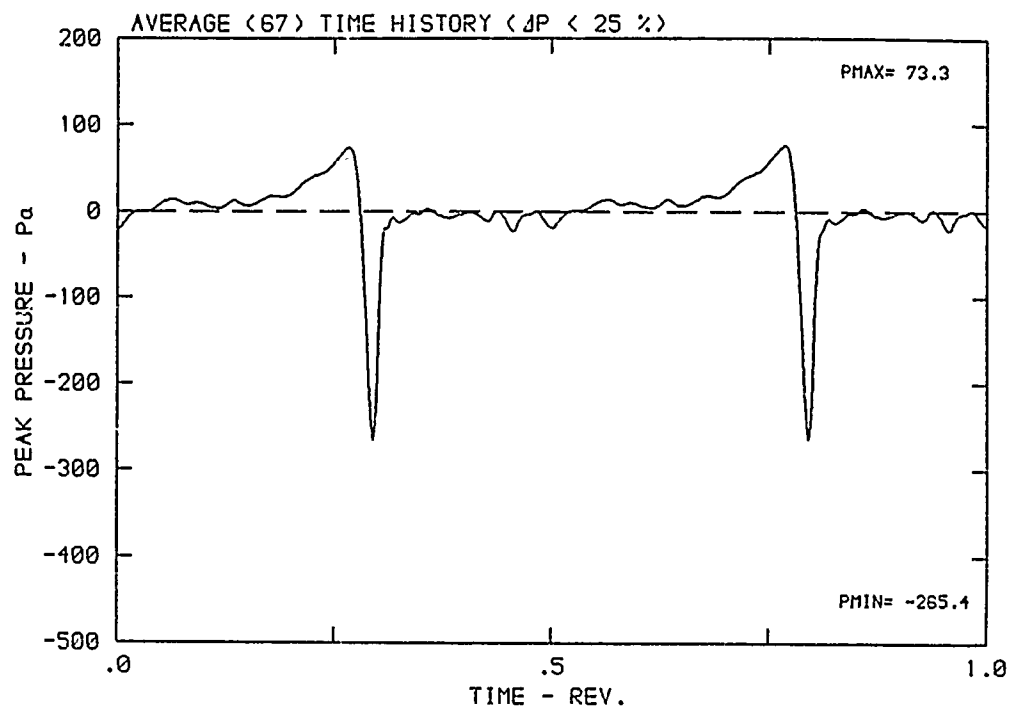
DATA POINT: BN-61 RUN: 52 MP: 4

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



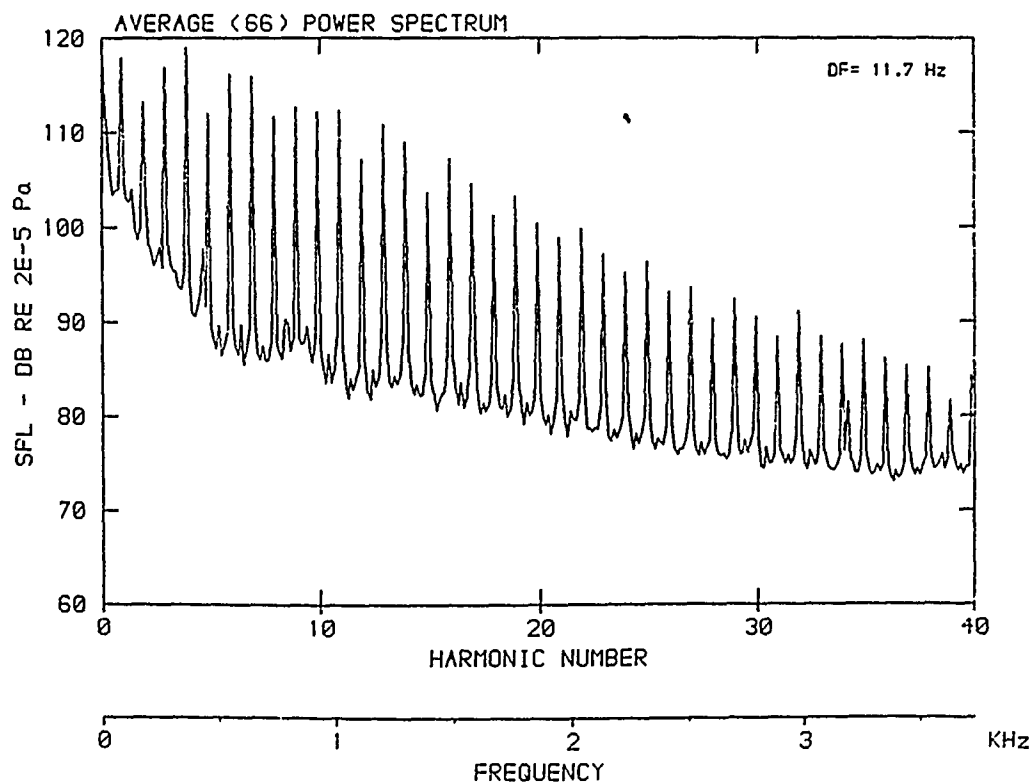
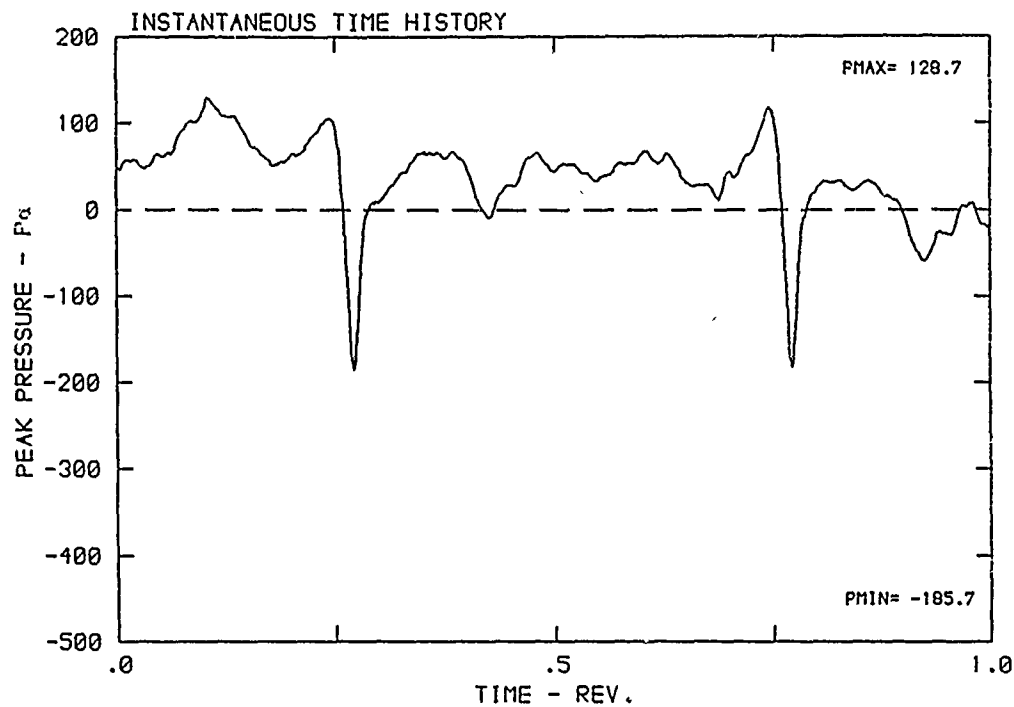
DATA POINT: BN-61 RUN: 52 MP: 4

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



DATA POINT: BN-61 RUN: 52 MP: 5

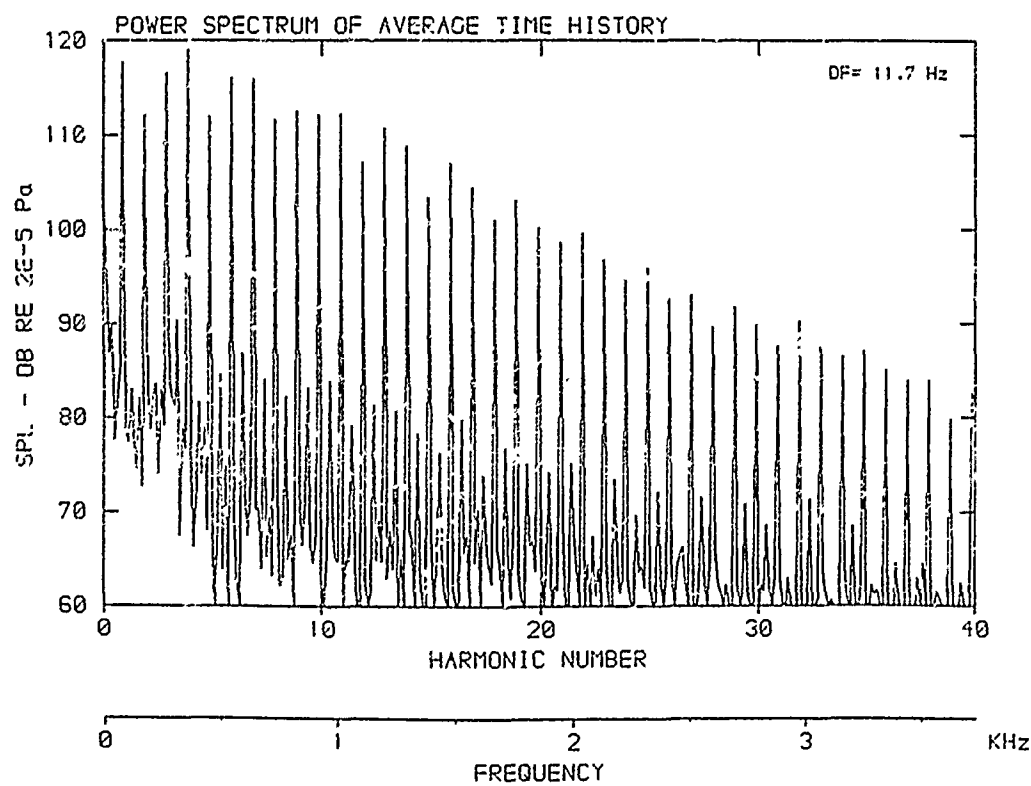
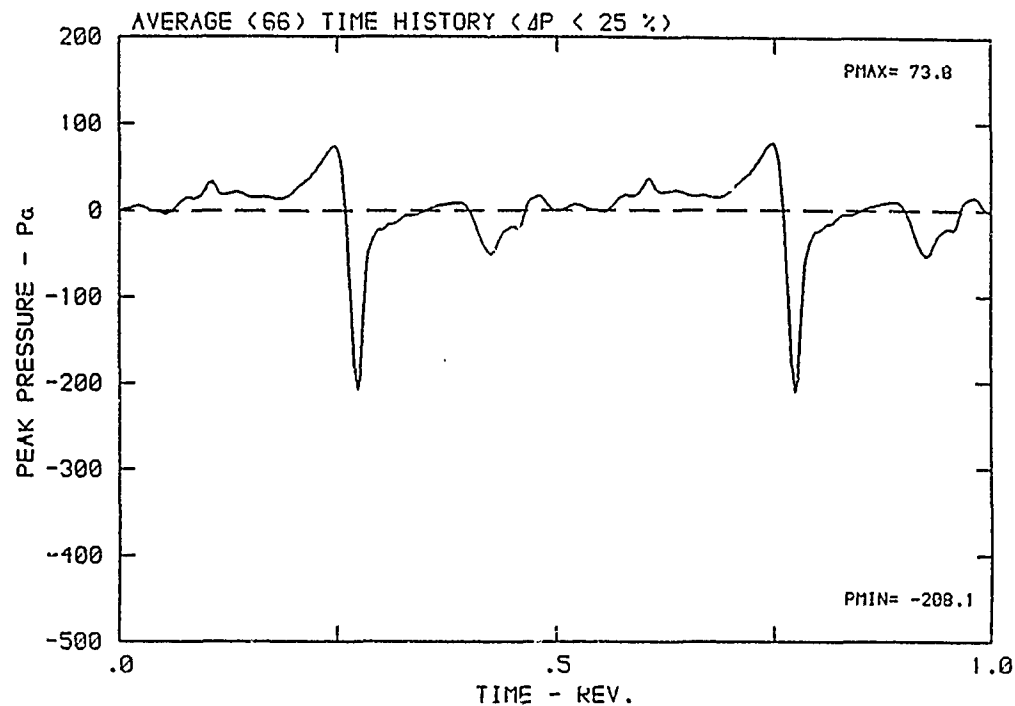
$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K





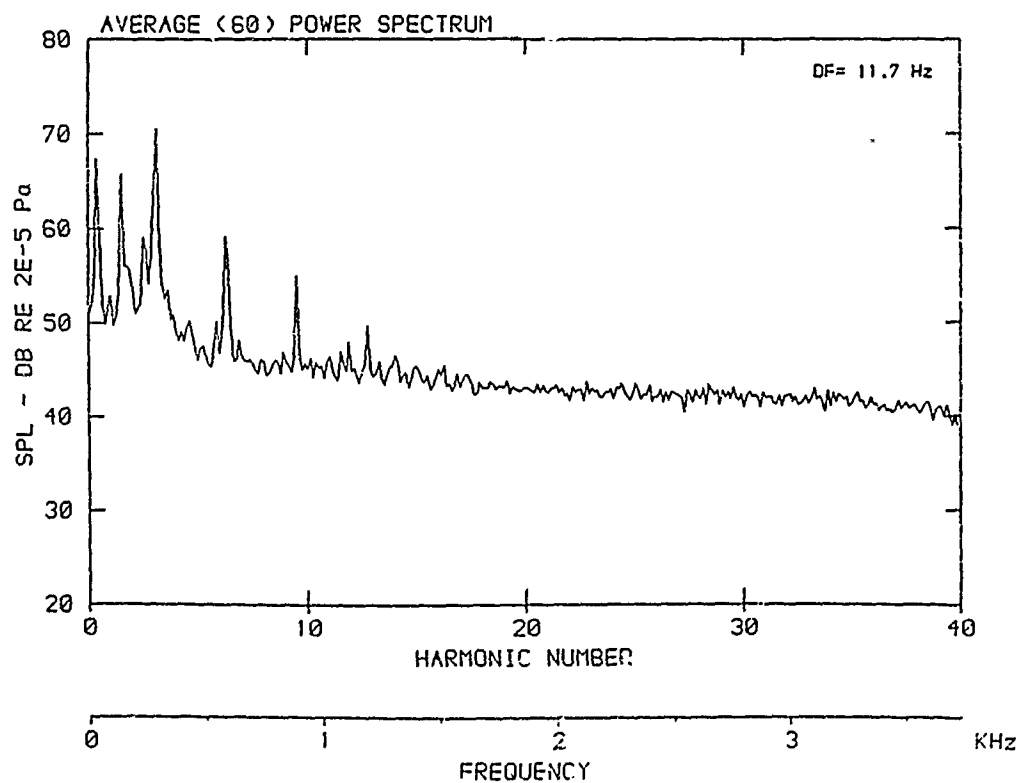
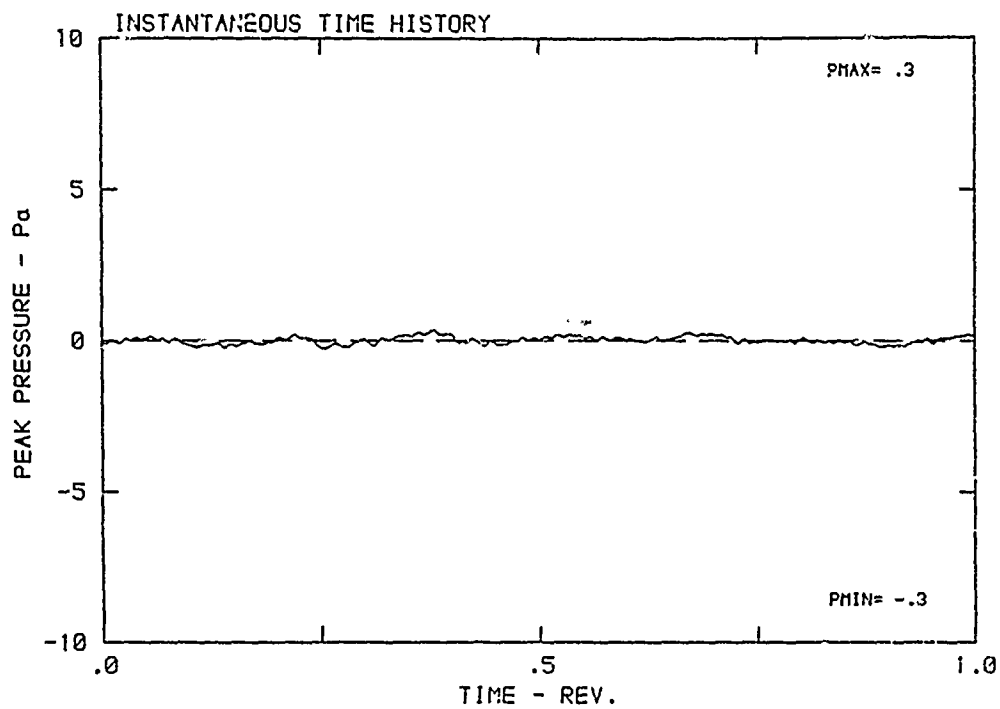
DATA POINT: BN-61 RUN: 52 MP: 5

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



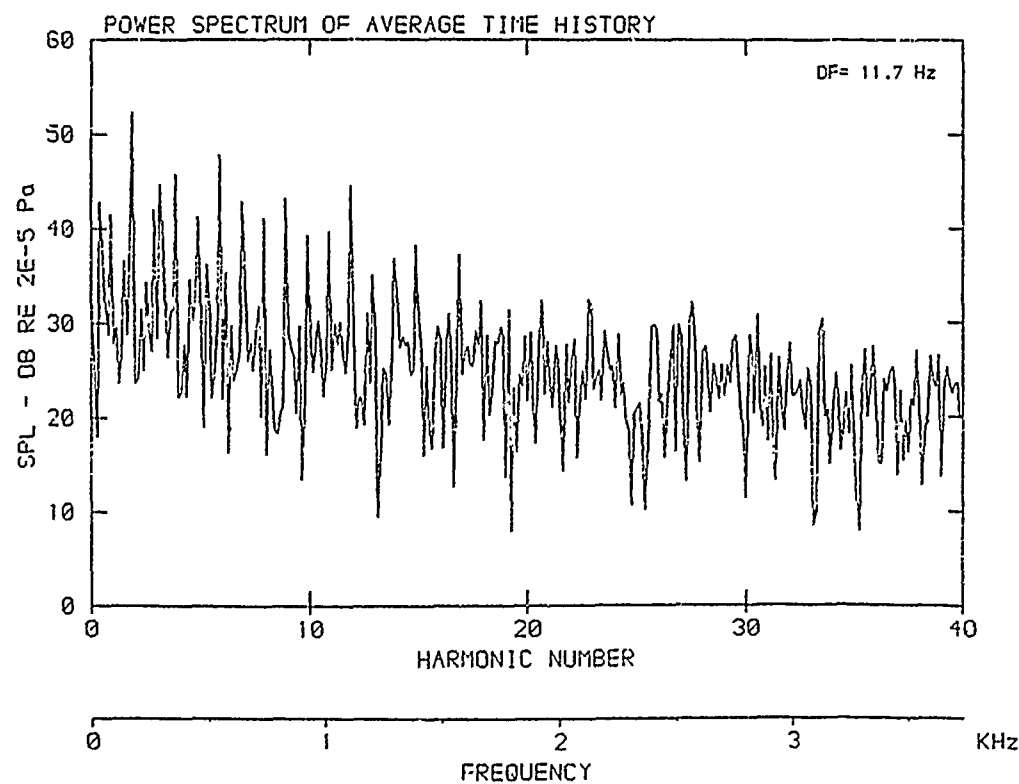
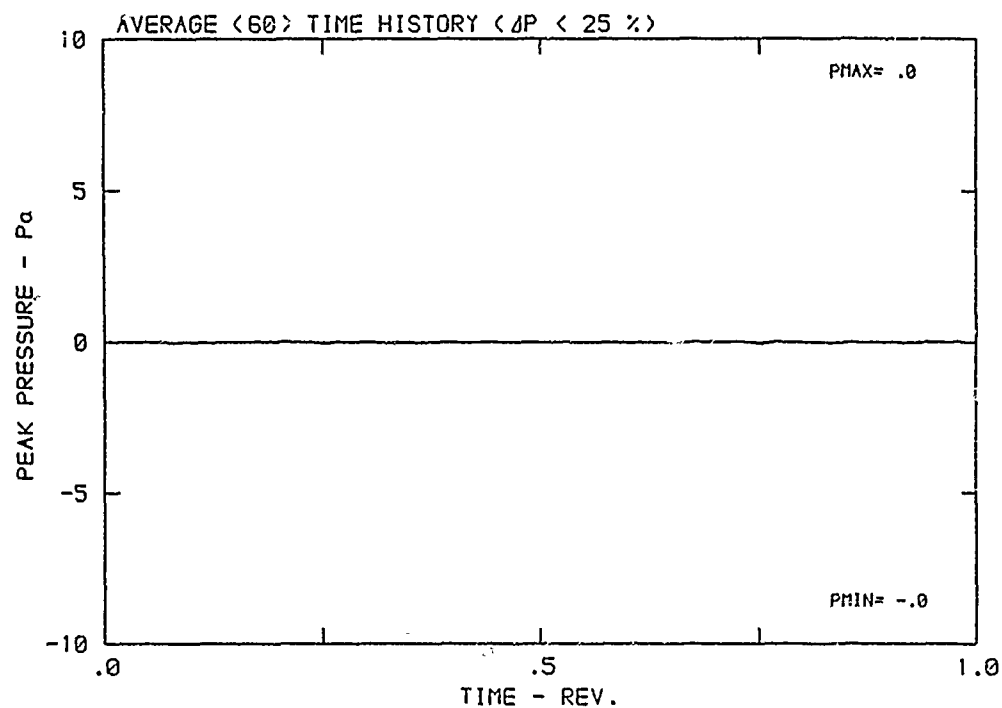
DATA POINT: BN-61 RUN: 52 MP: 6

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



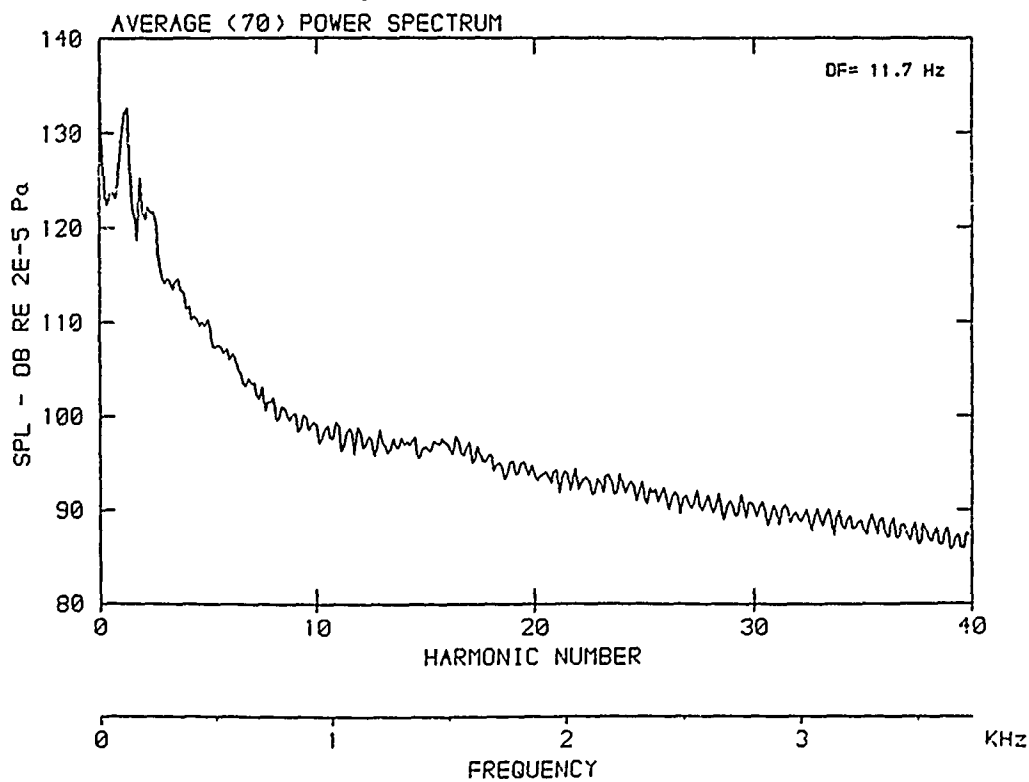
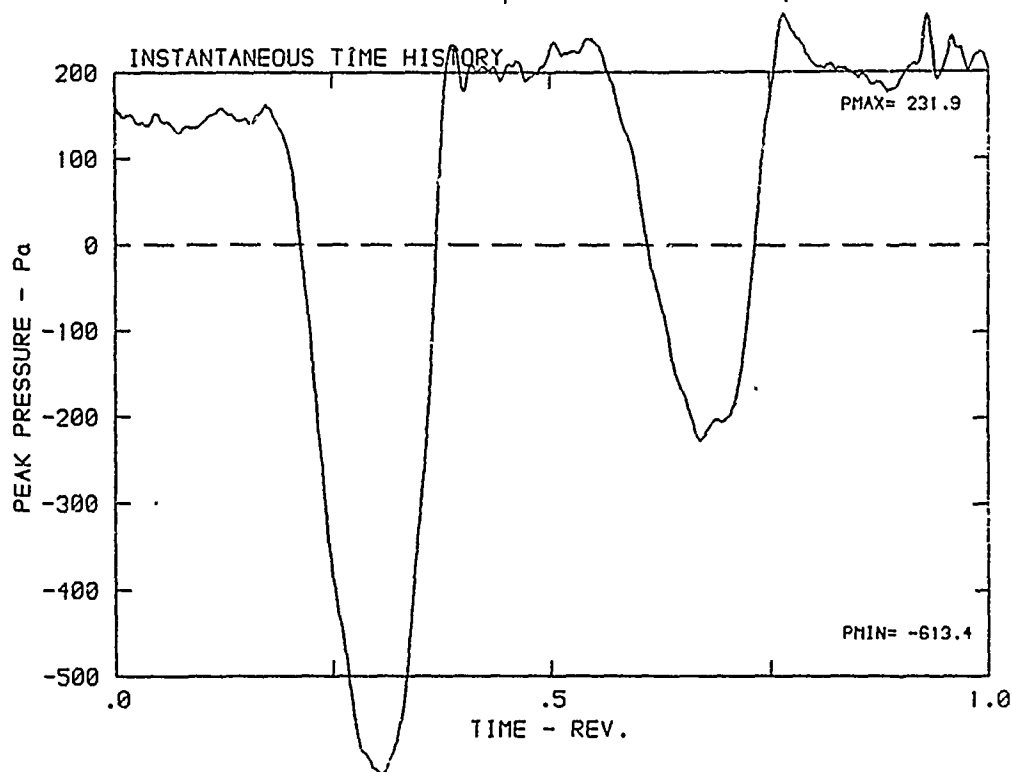
DATA POINT: BN-61 RUN: 52 MP: 6

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



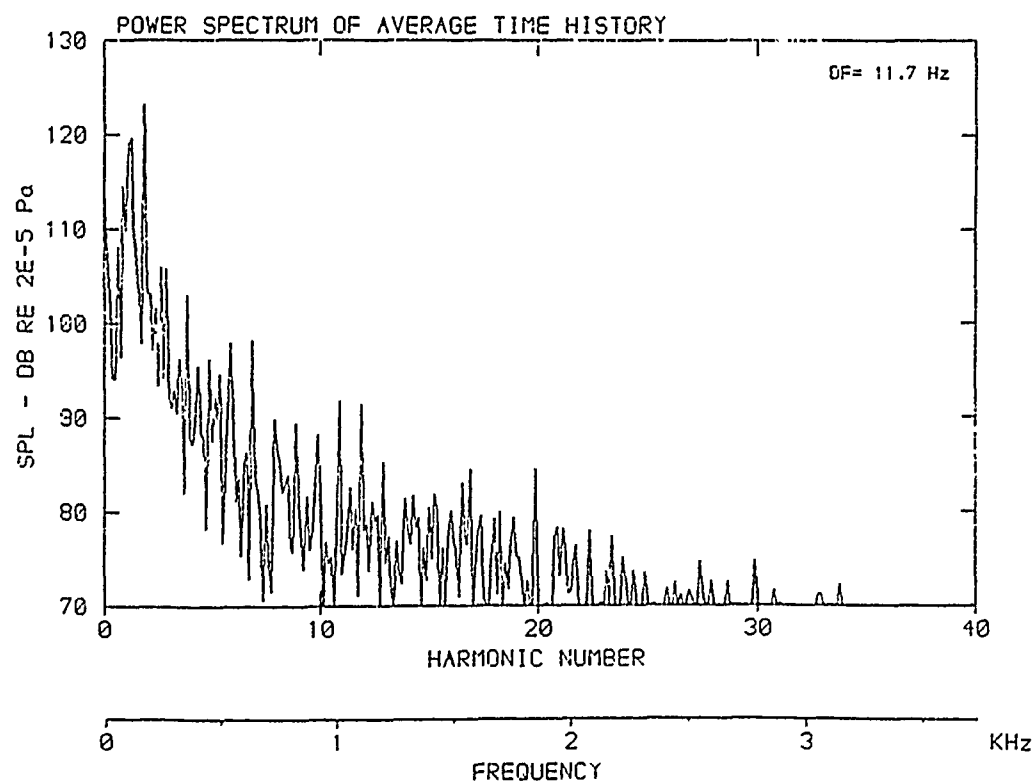
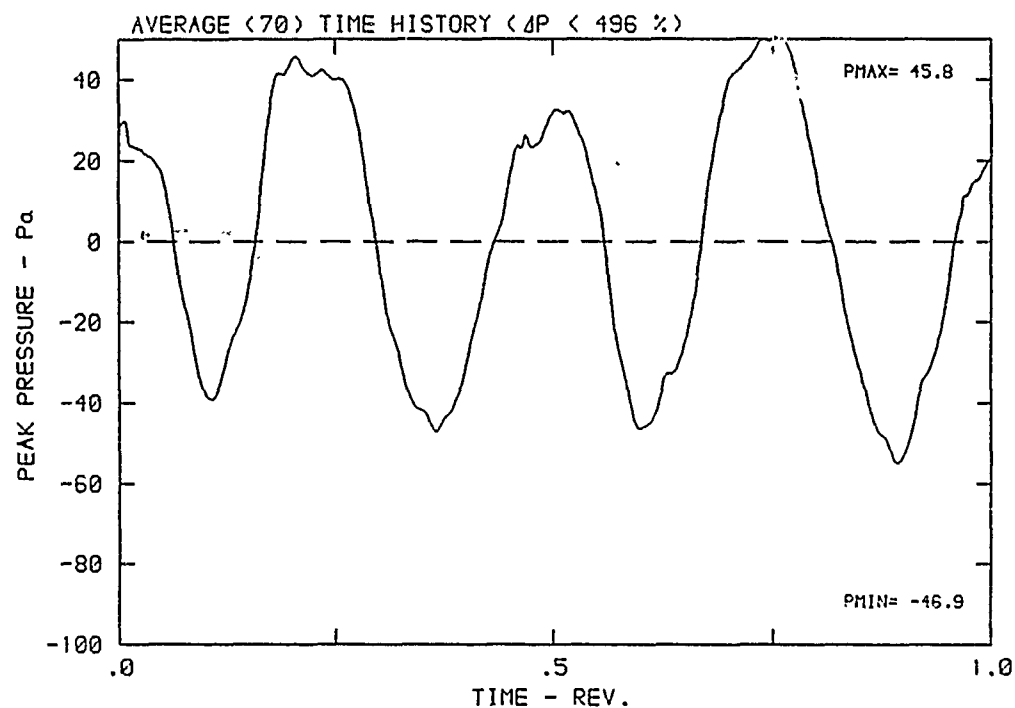
DATA POINT: BN-61 RUN: 52 MP: 7

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



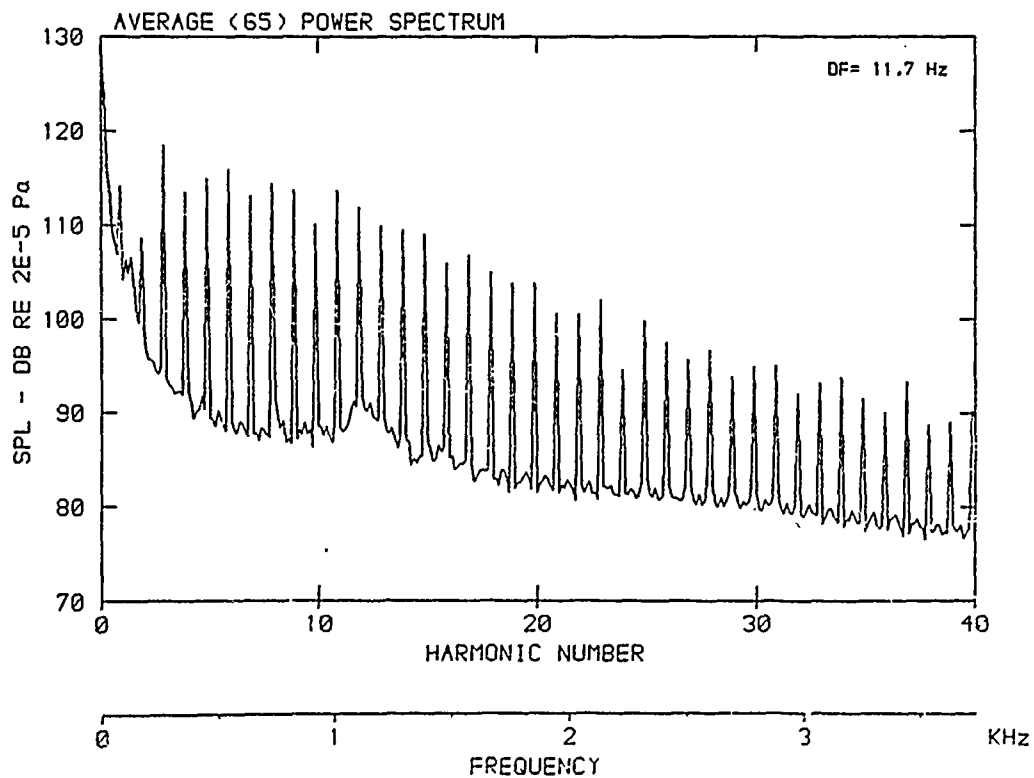
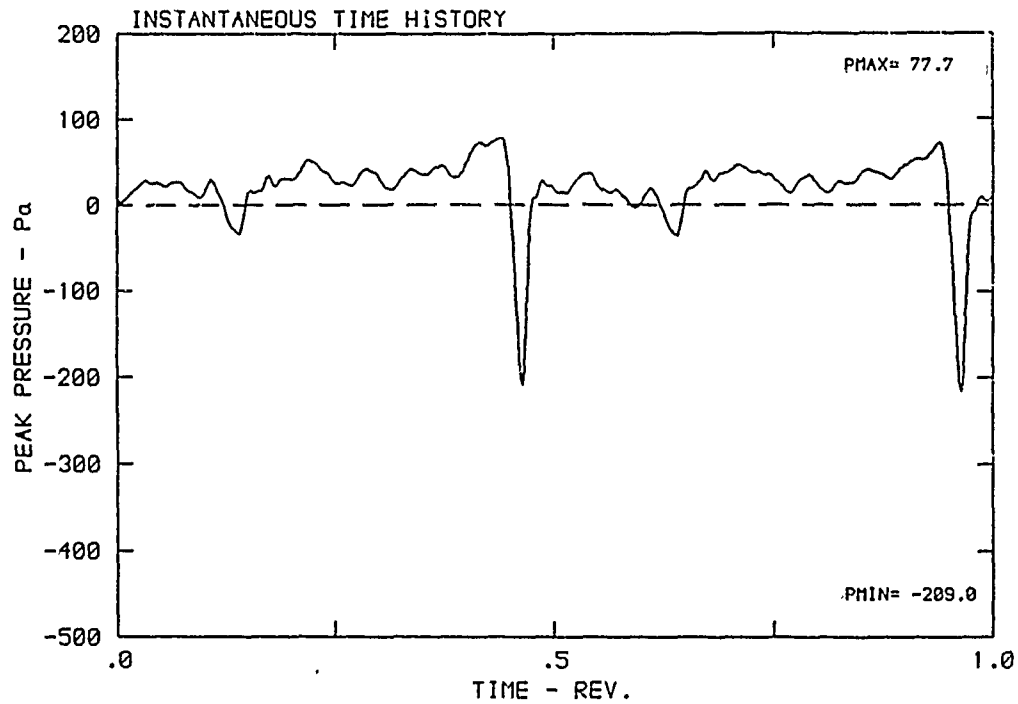
DATA POINT: BN-61 RUN: 52 MP: 7

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



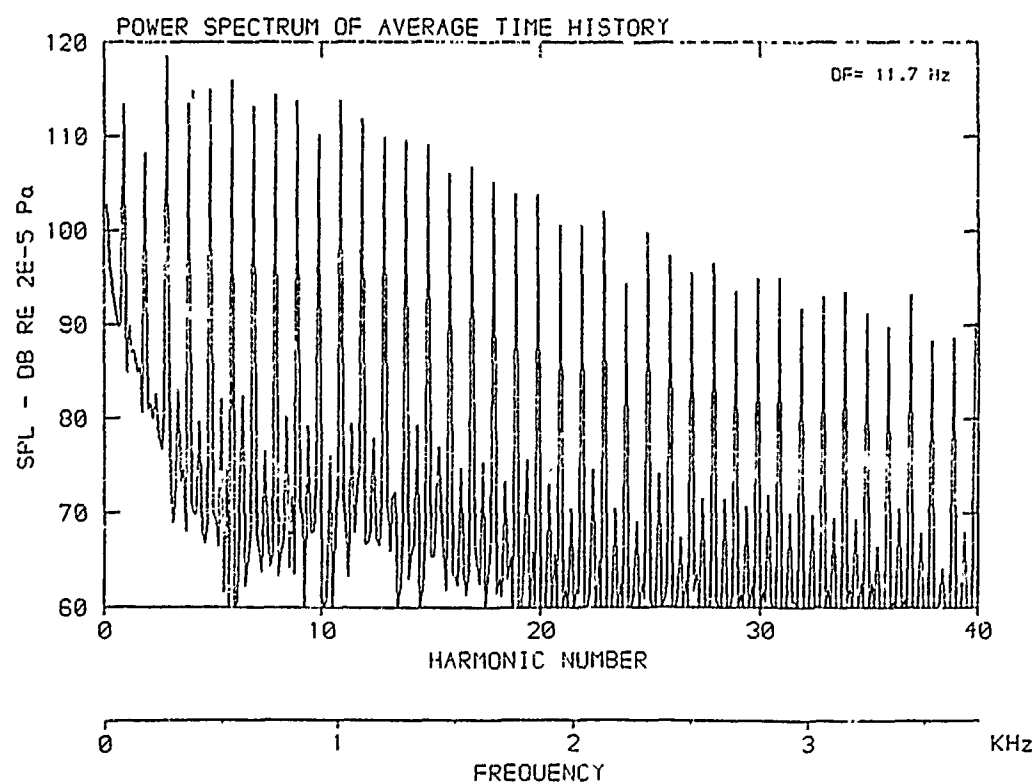
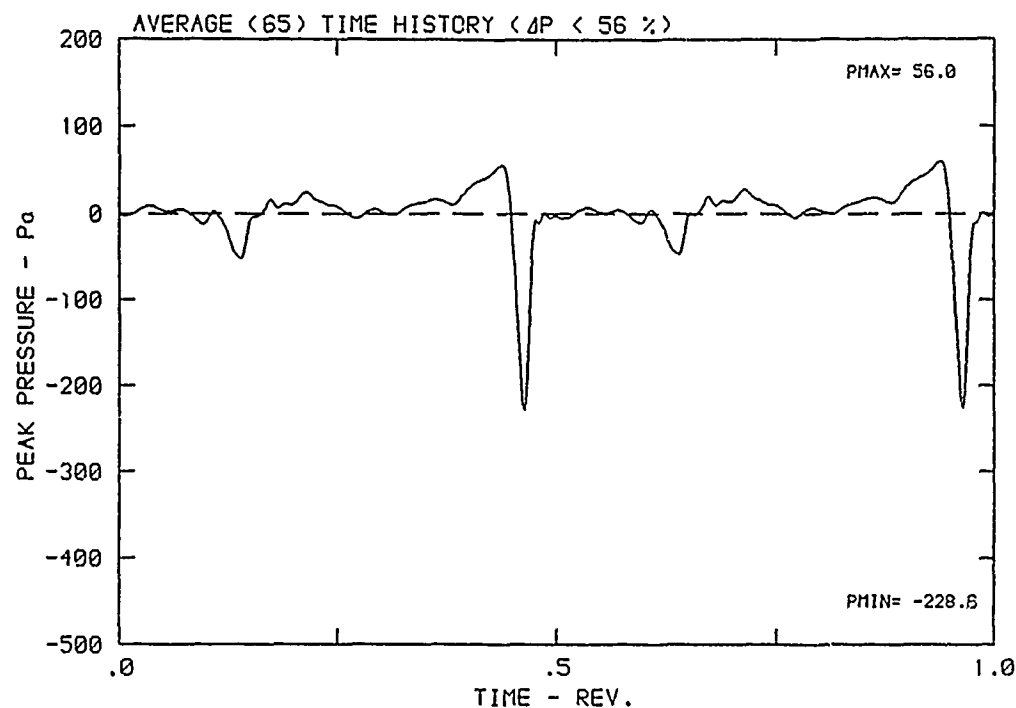
DATA POINT: BN-61 RUN: 52 MP: 9

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



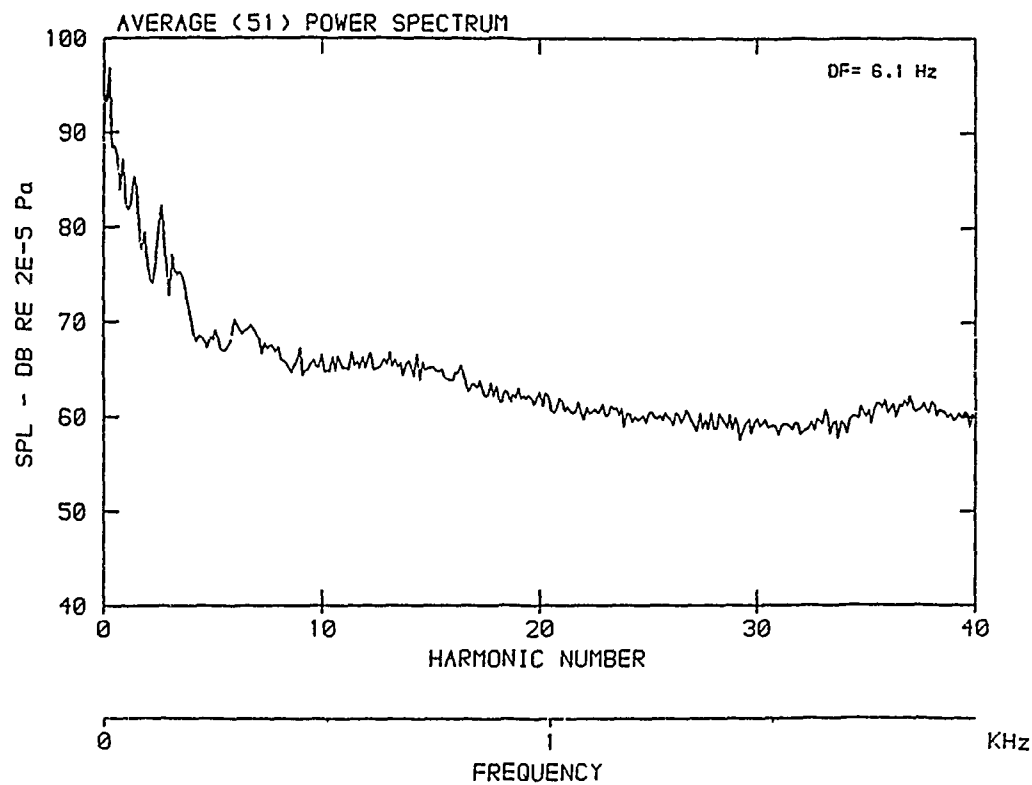
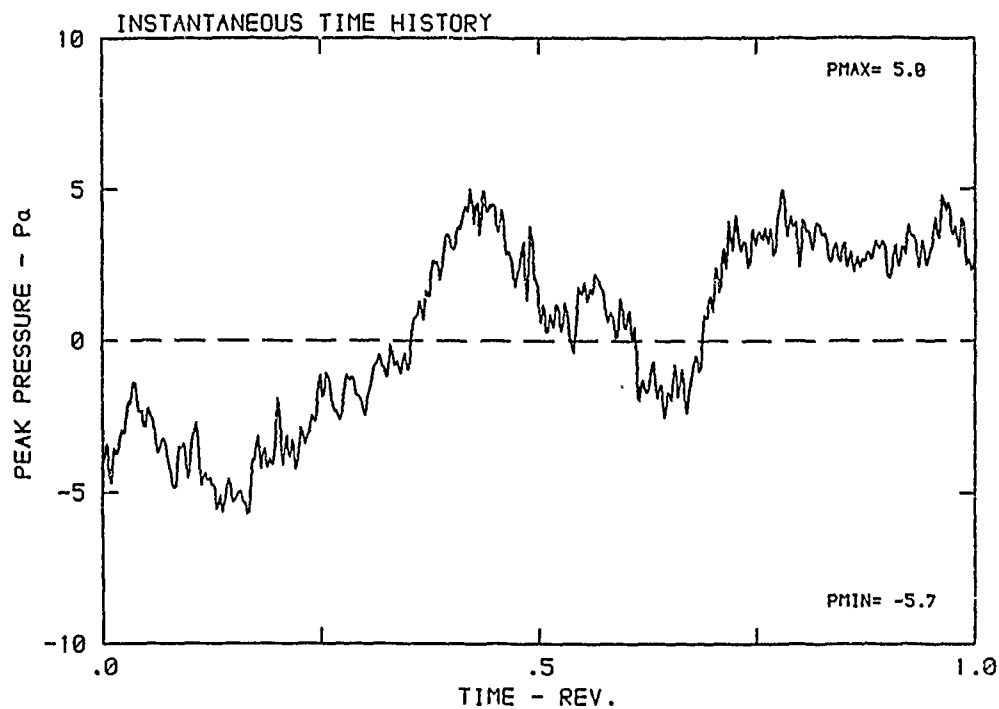
DATA POINT: BN-61 RUN: 52 MP: 9

$\beta$ : 19.9° MH: .9026 n: 2800 rpm v/u: .258  $\phi$ : .0° T: 289.0 K



DATA POINT: BN-7      RUN: 55      MP: 1

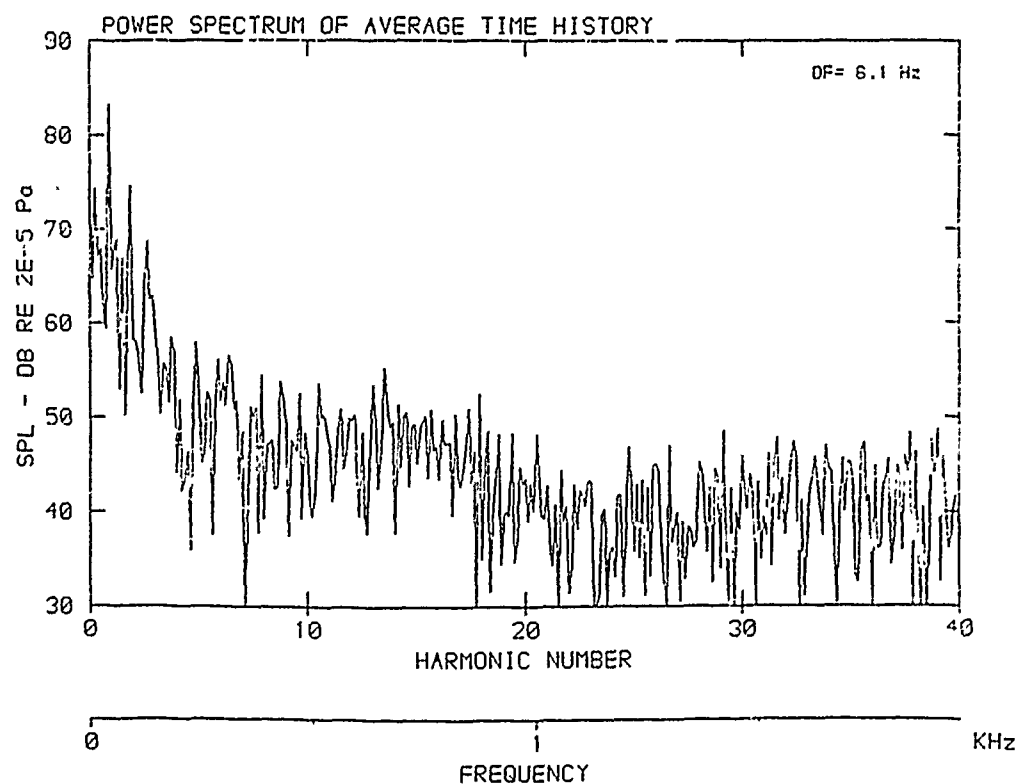
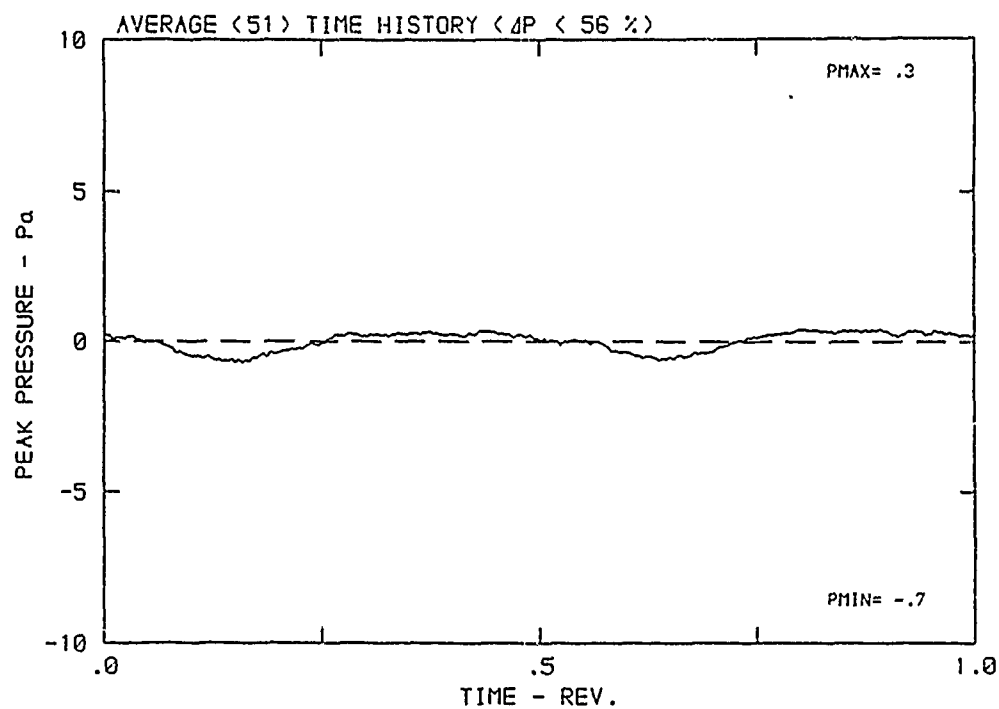
$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K





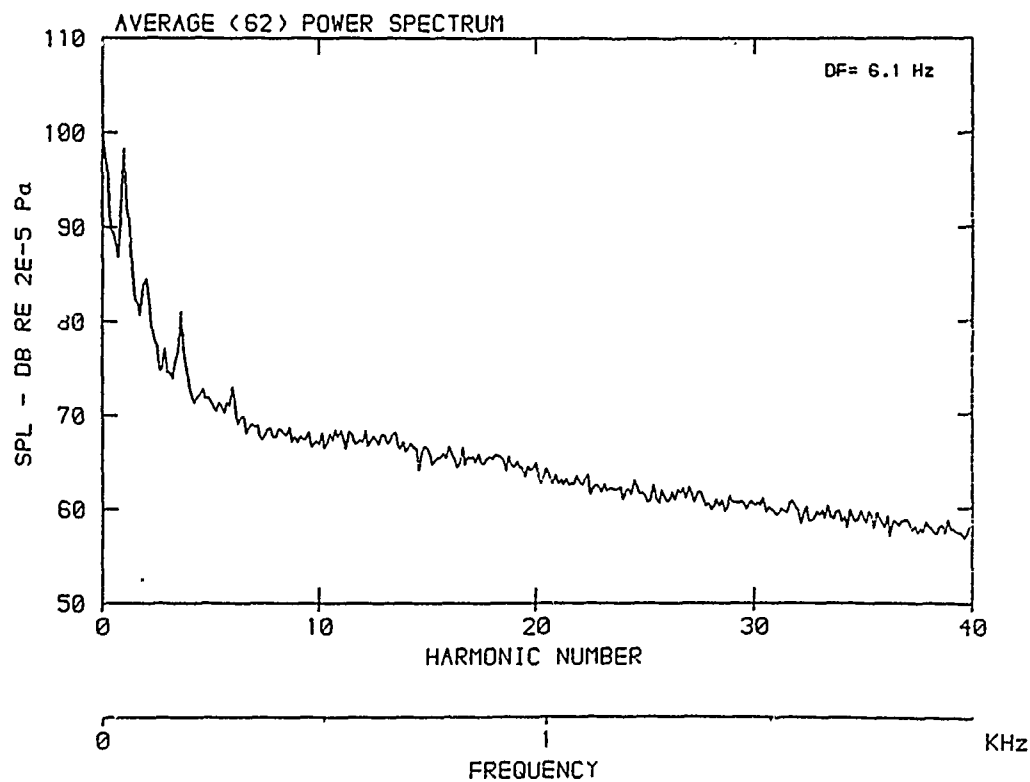
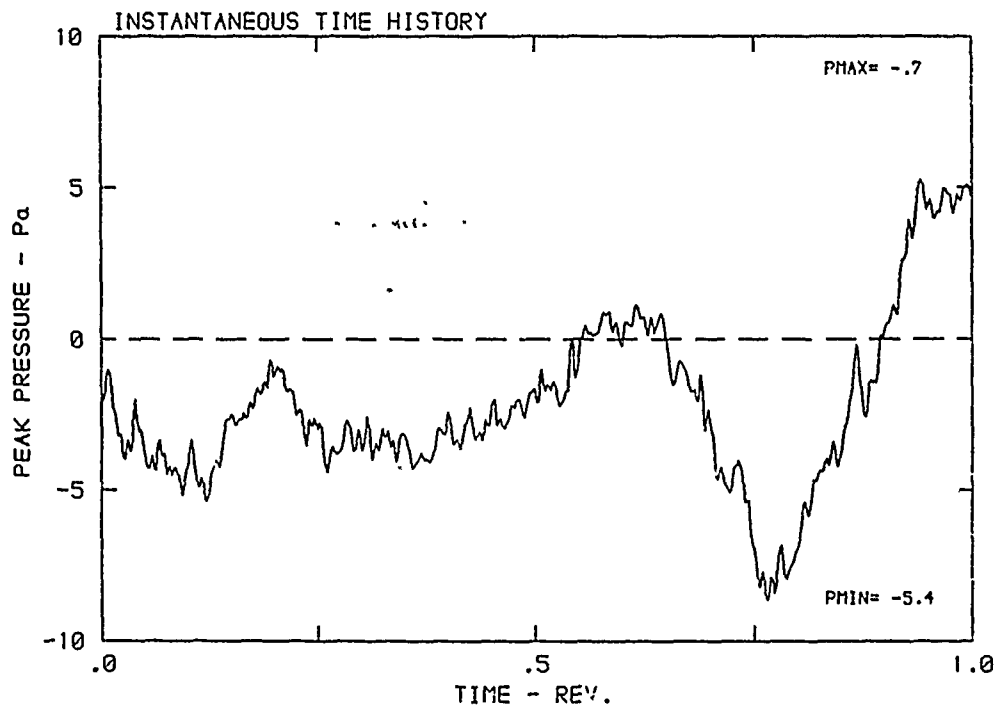
DATA POINT: BN-7    RUN: 55    MP: 1

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



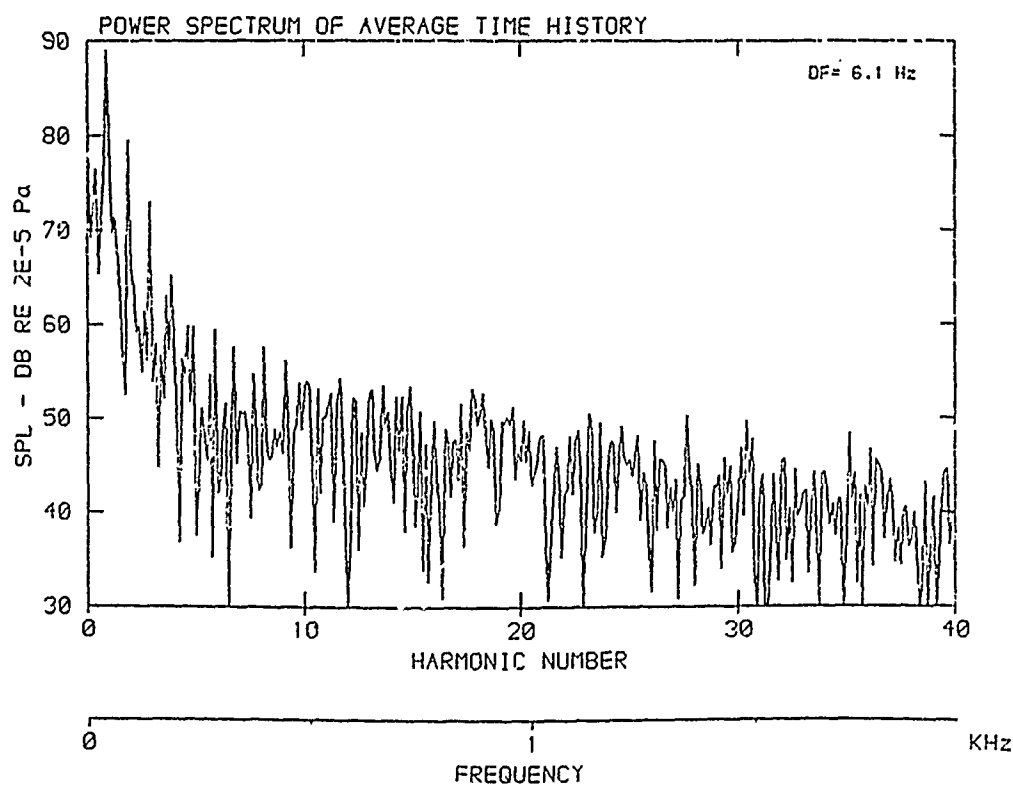
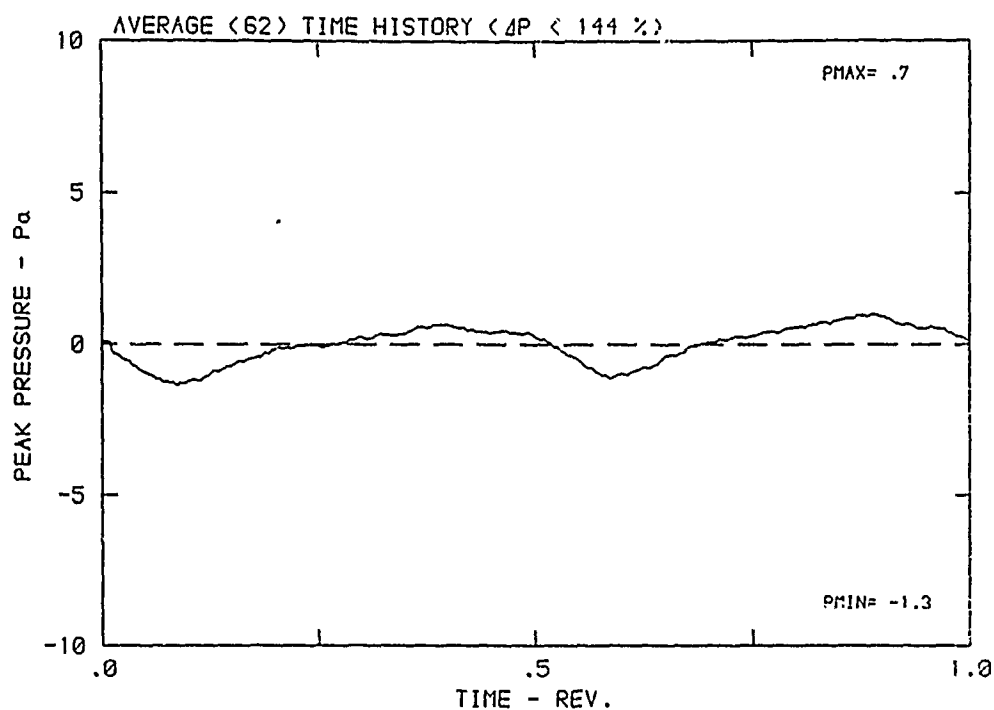
DATA POINT: BN-7    RUN: 55    MP: 2

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



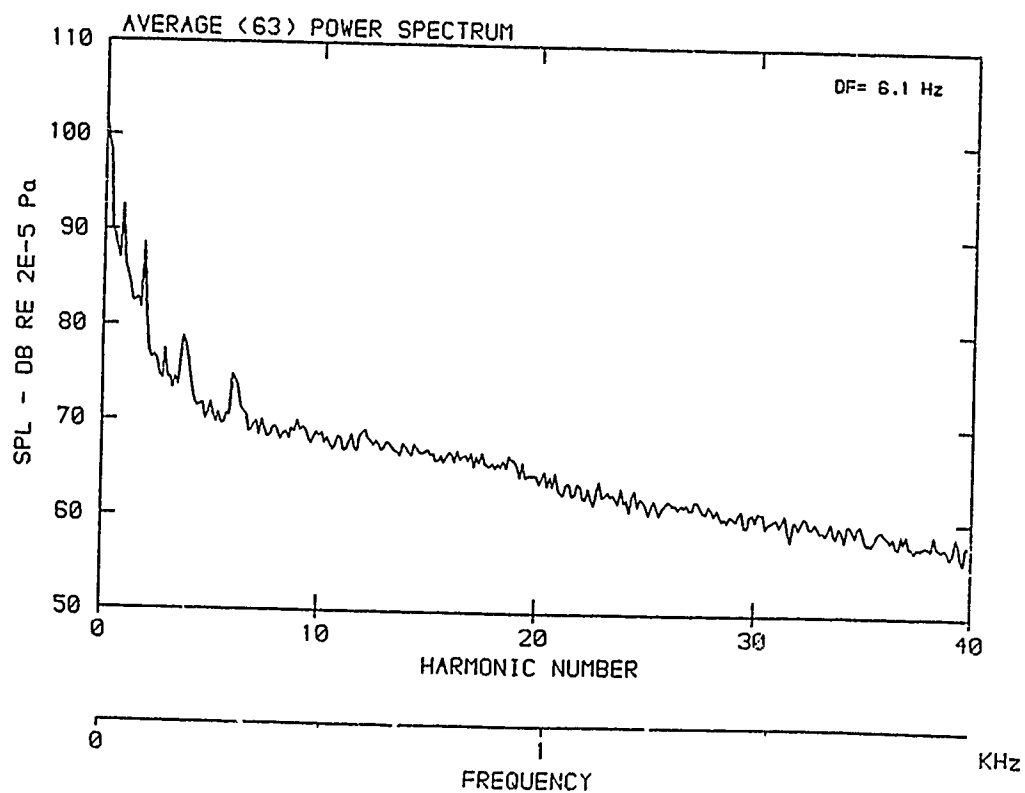
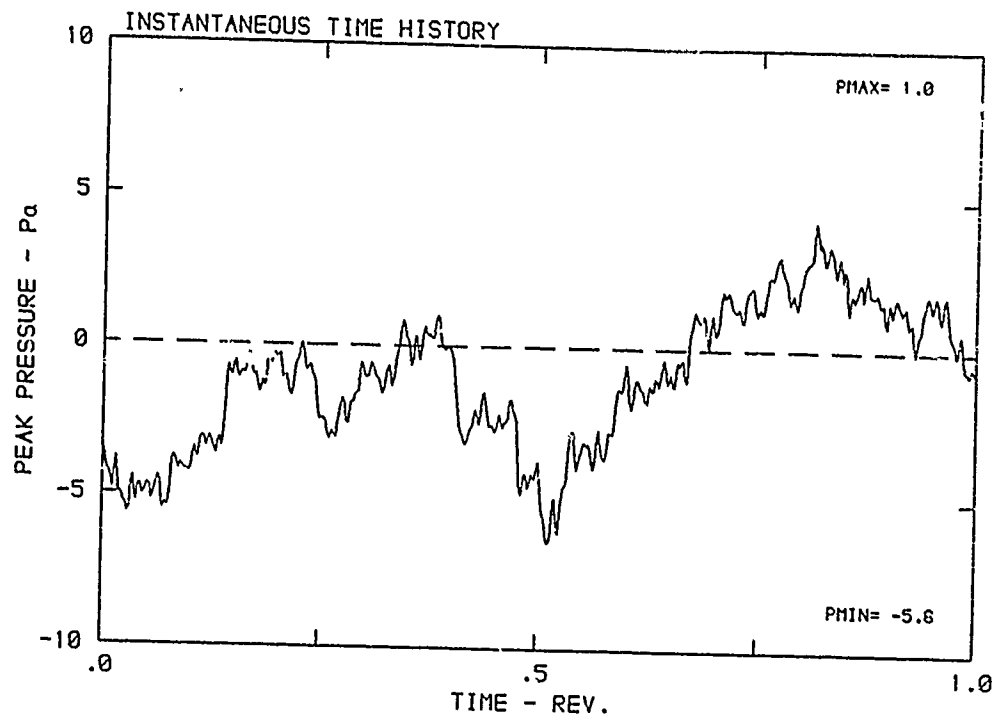
DATA POINT: BN-7      RUN: 55      MP: 2

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



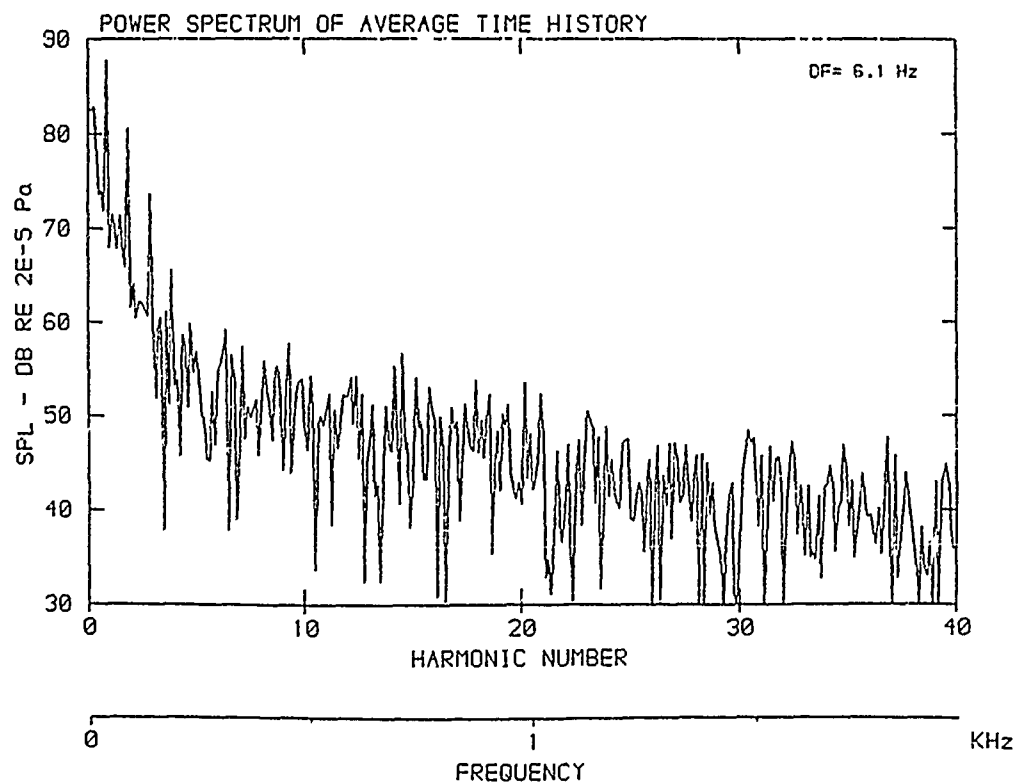
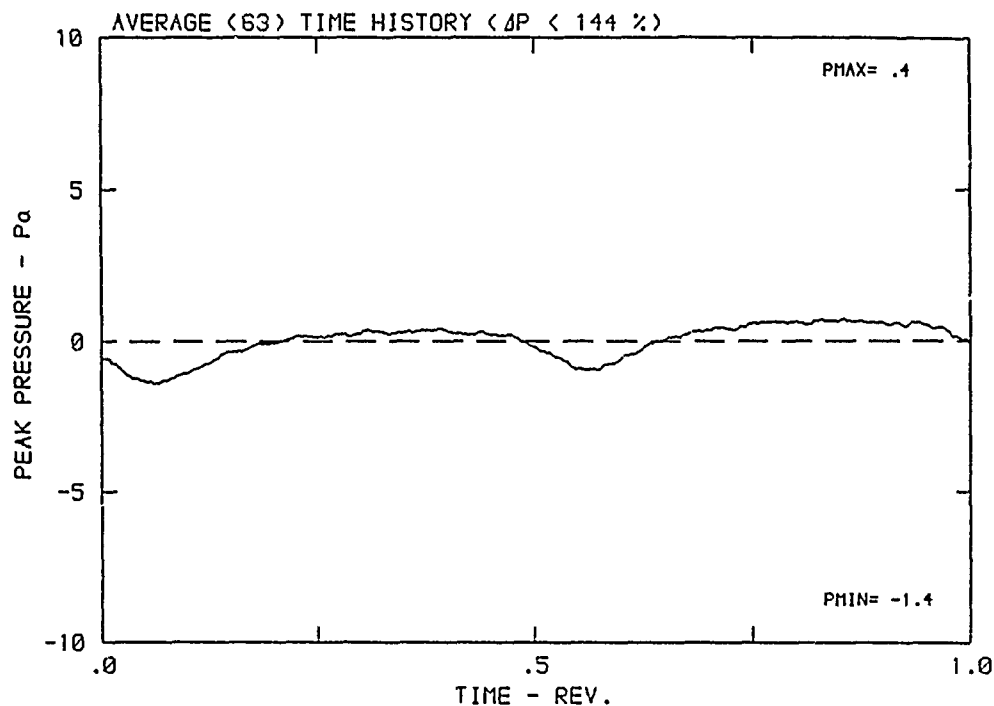
DATA POINT: BN-7      RUN: 55      MP: 3

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



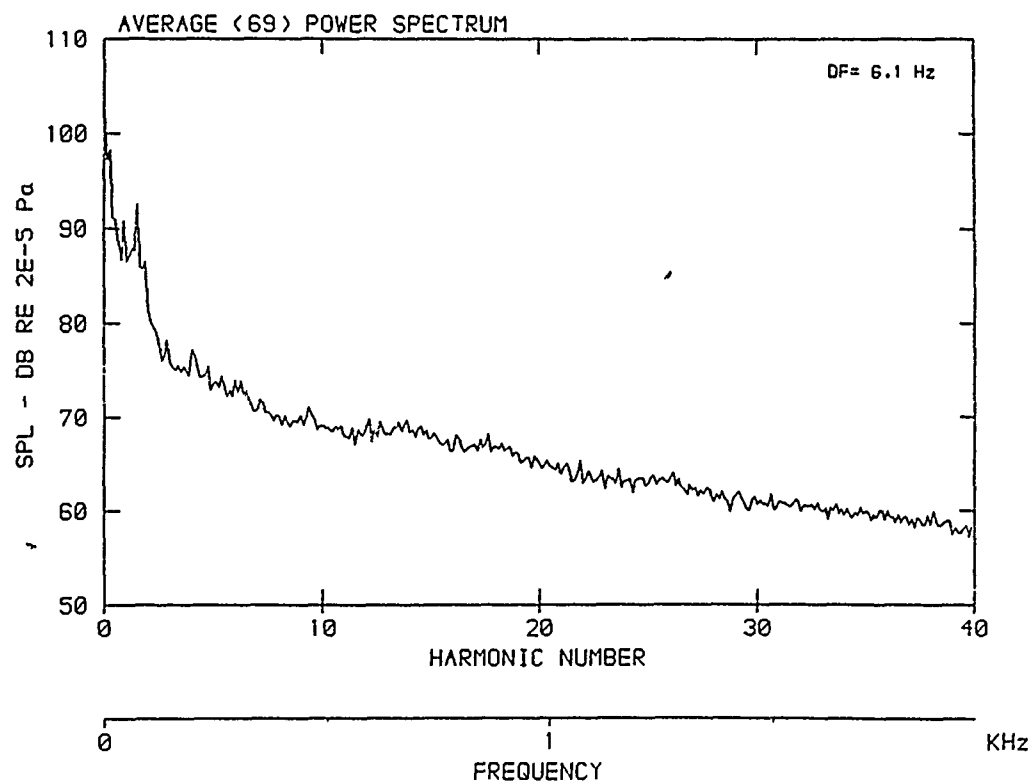
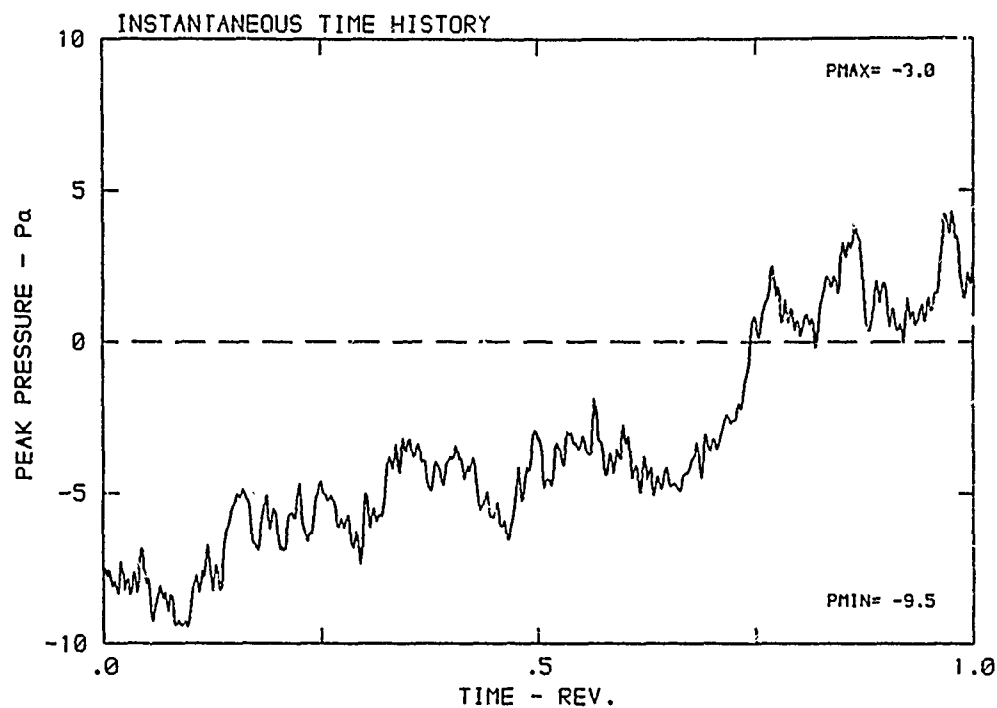
DATA POINT: BN-7      RUN: 55      MP: 3

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



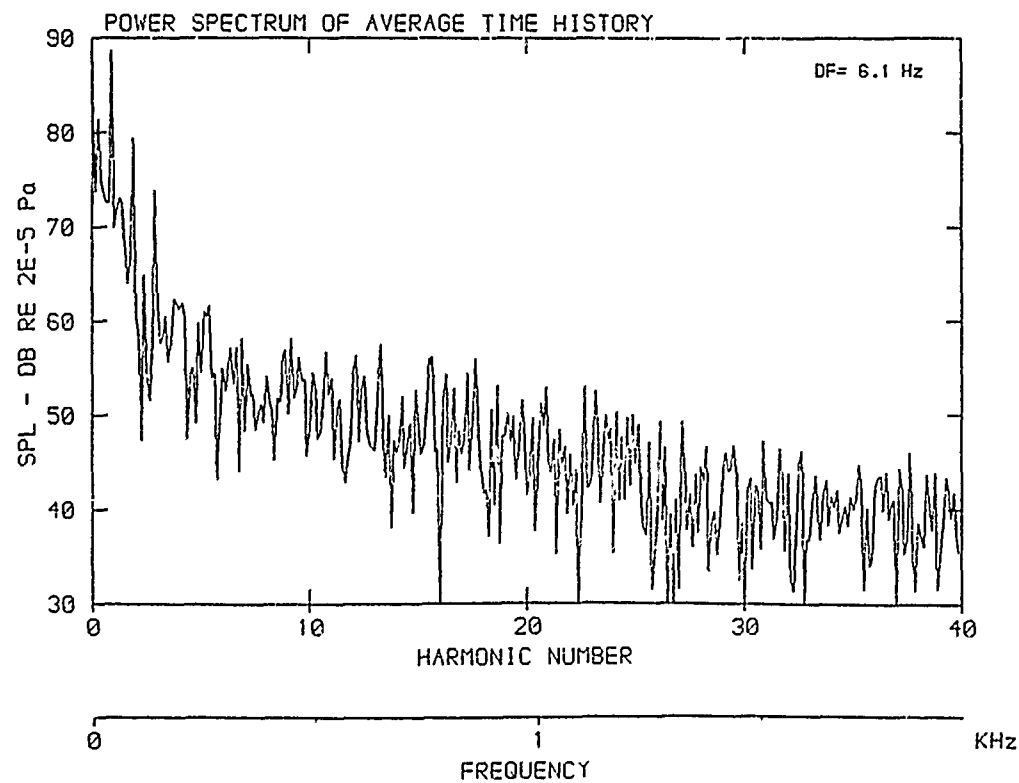
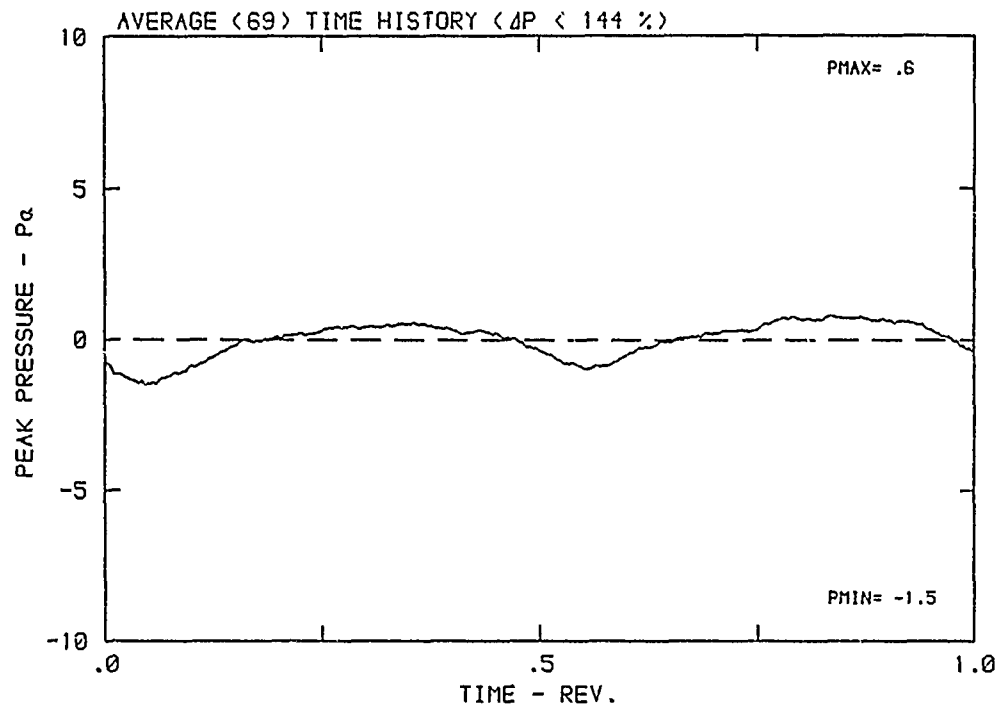
DATA POINT: BN-7      RUN: 55      MP: 4

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



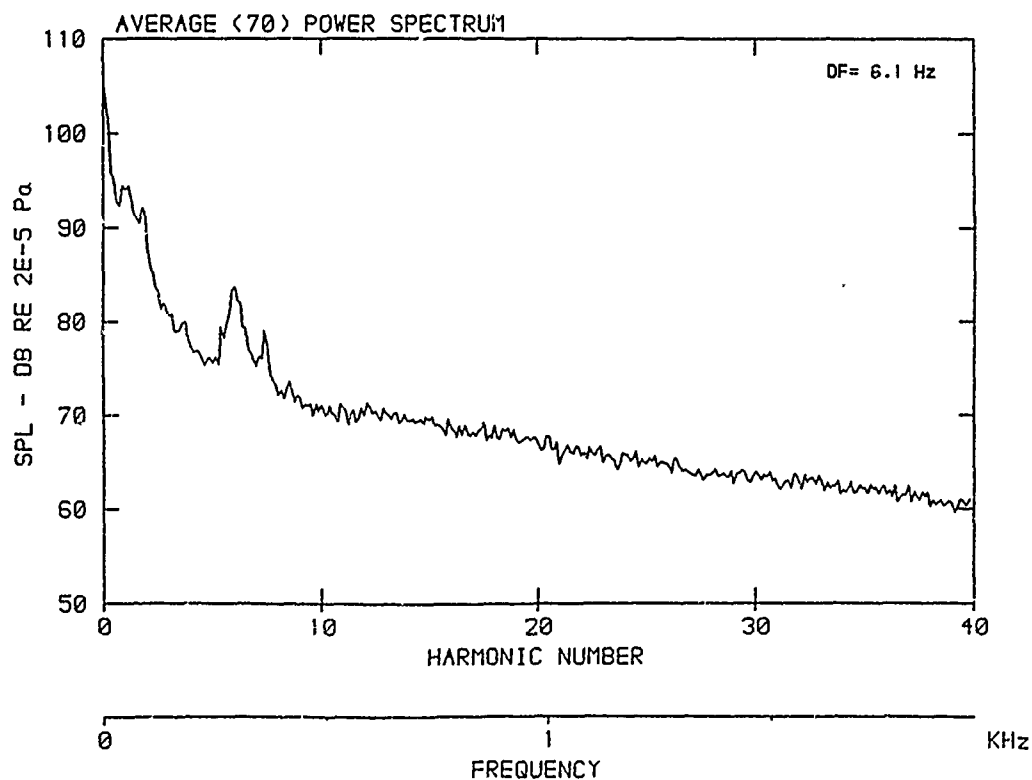
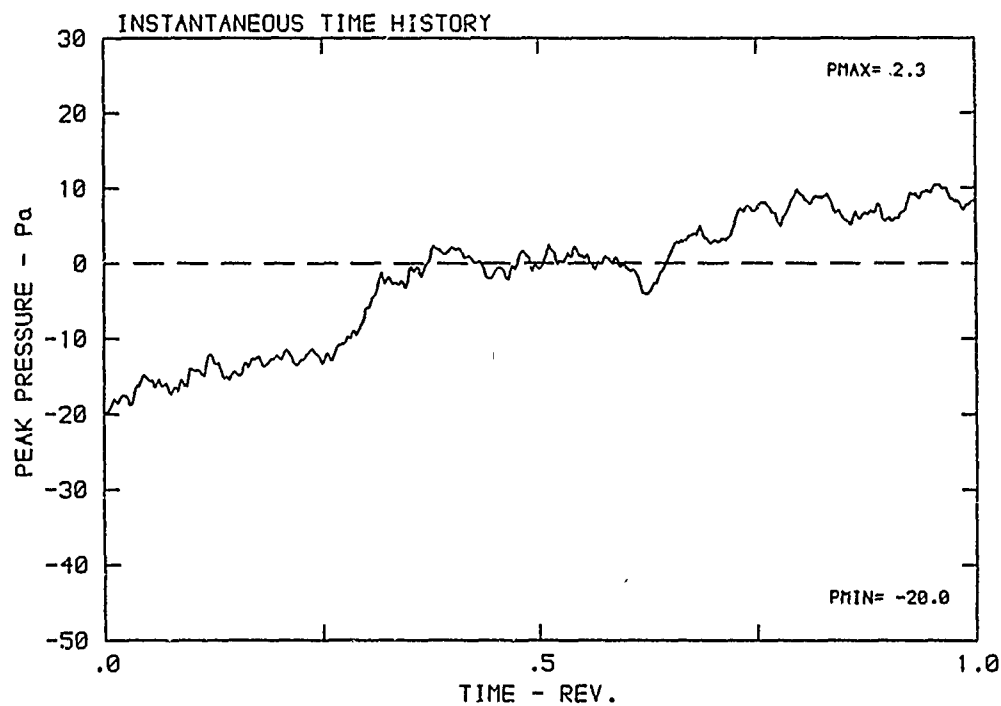
DATA POINT: BN-7      RUN: 55      MP: 4

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



DATA POINT: BN-7      RUN: 55      MP: 5

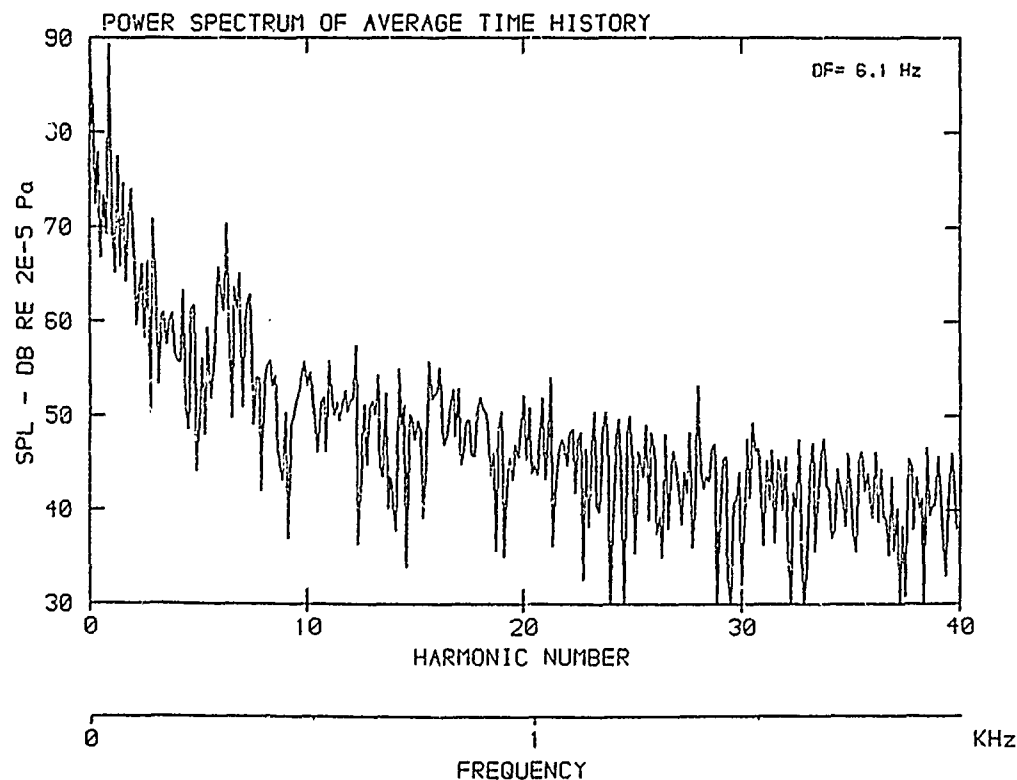
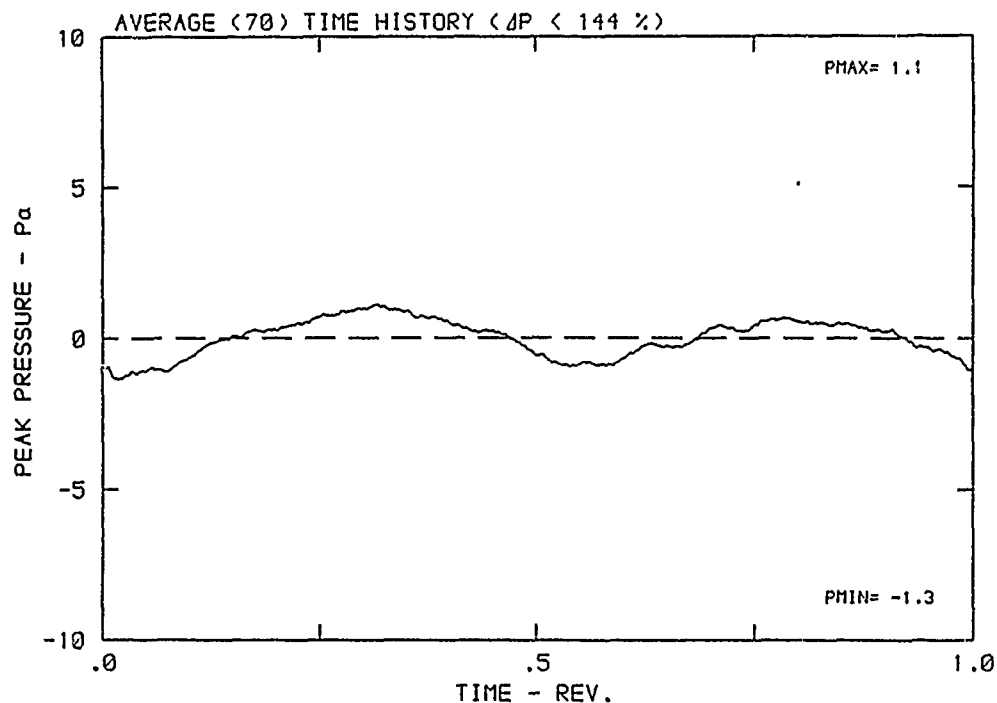
$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K





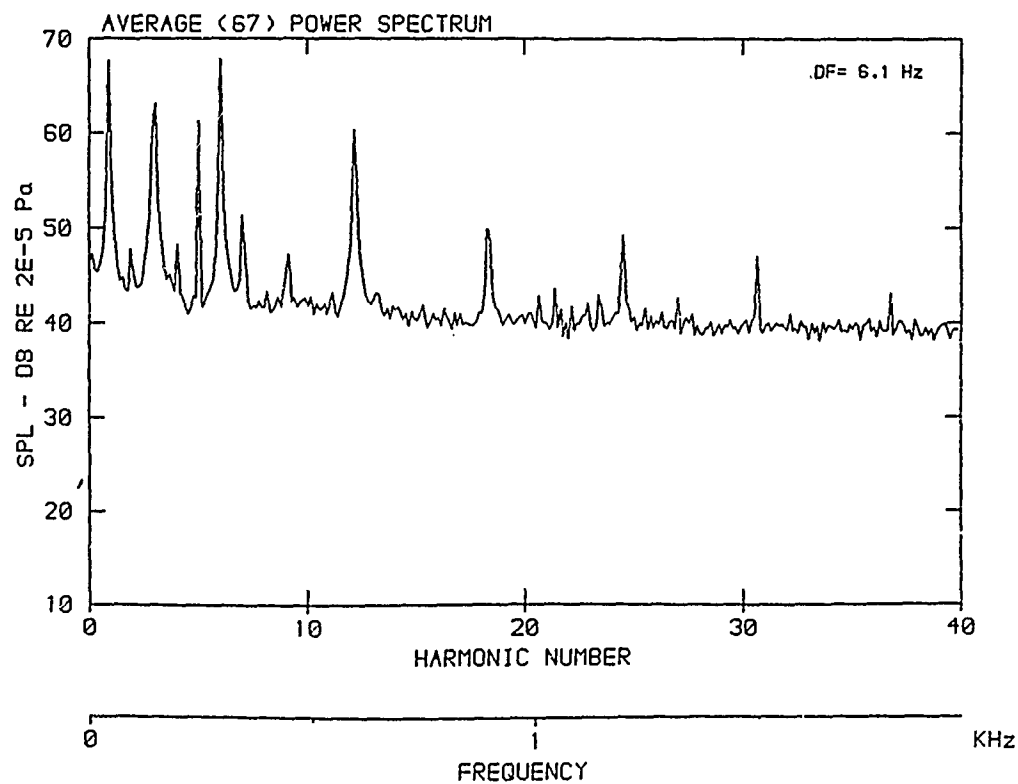
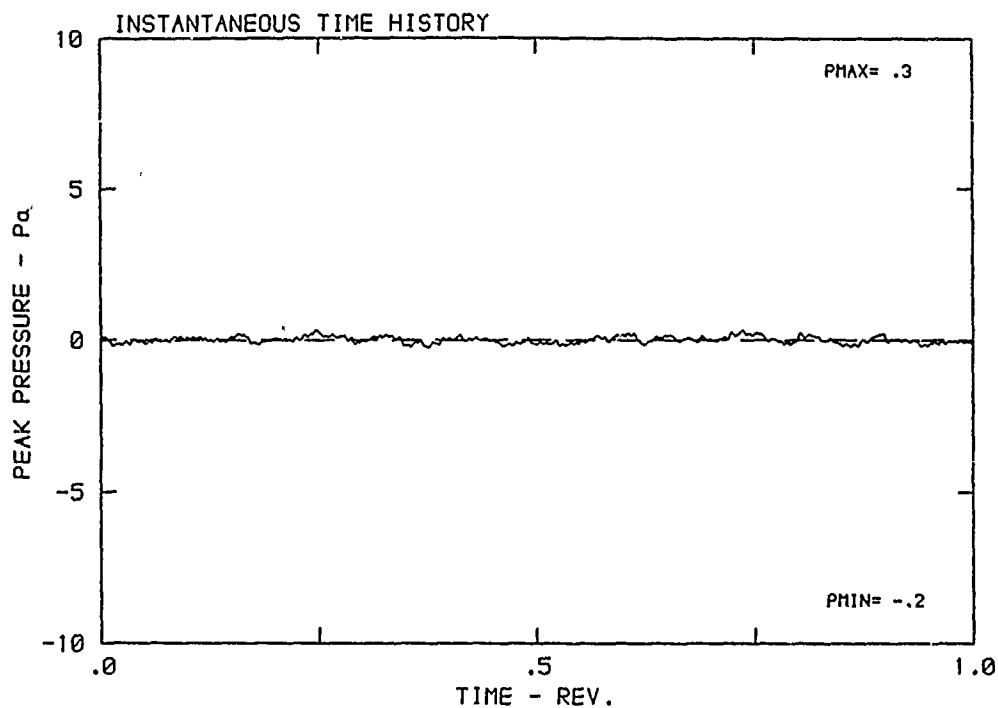
DATA POINT: BN-7    RUN: 55    MP: 5

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



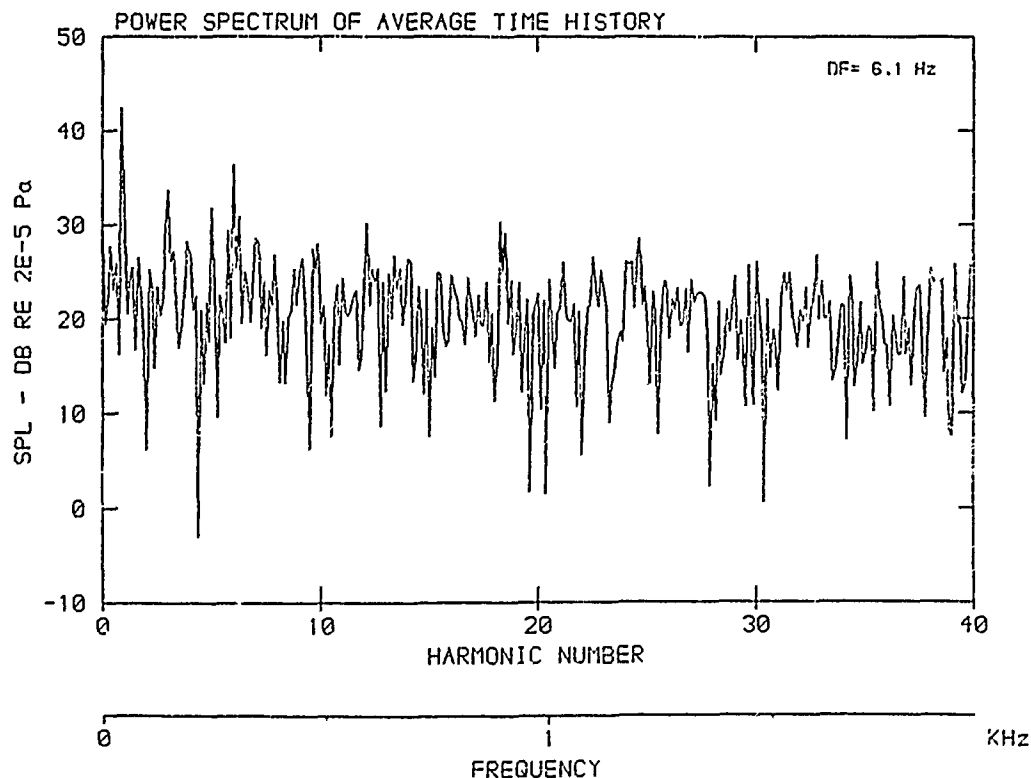
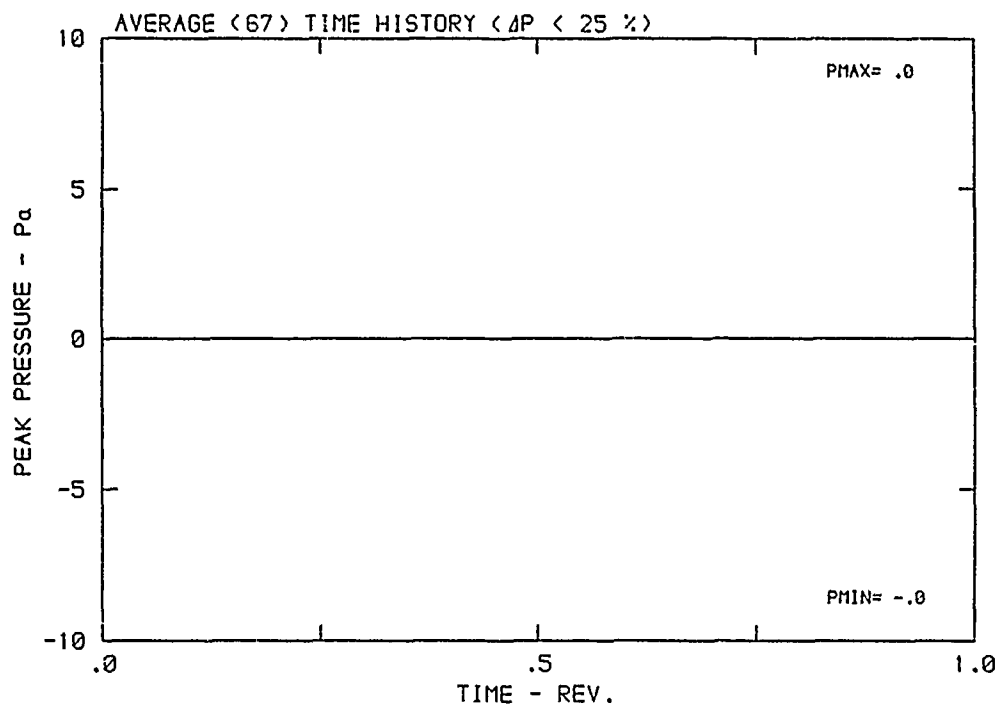
DATA POINT: BN-7      RUN: 55      MP: 6

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



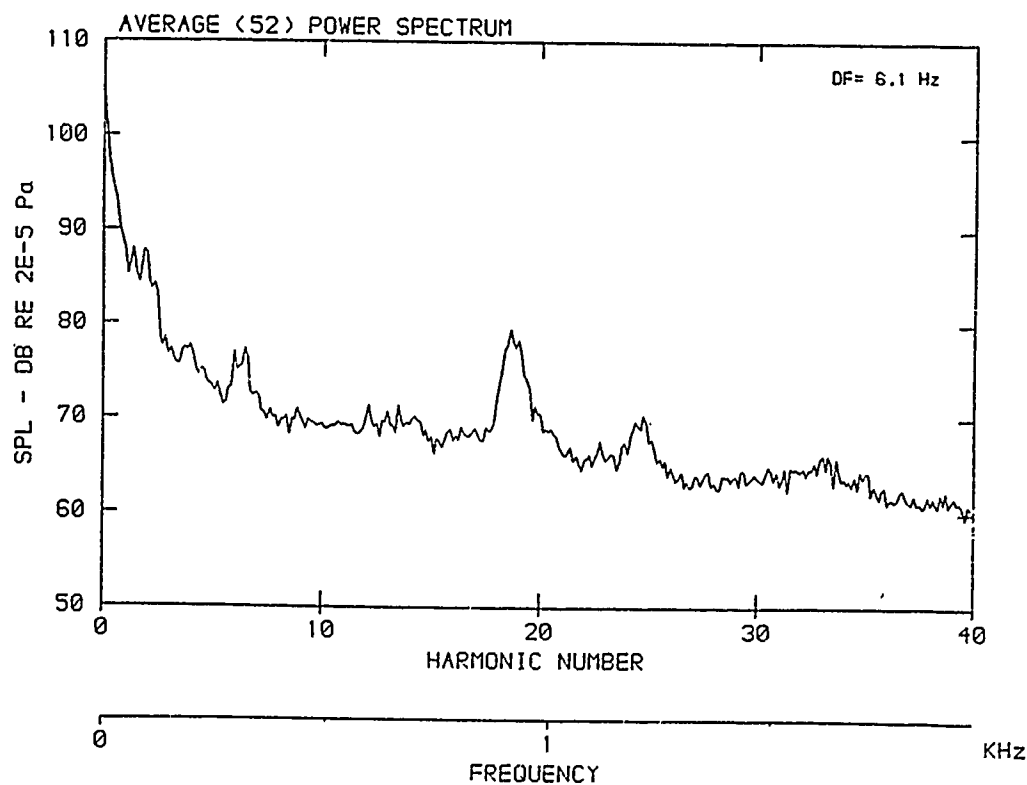
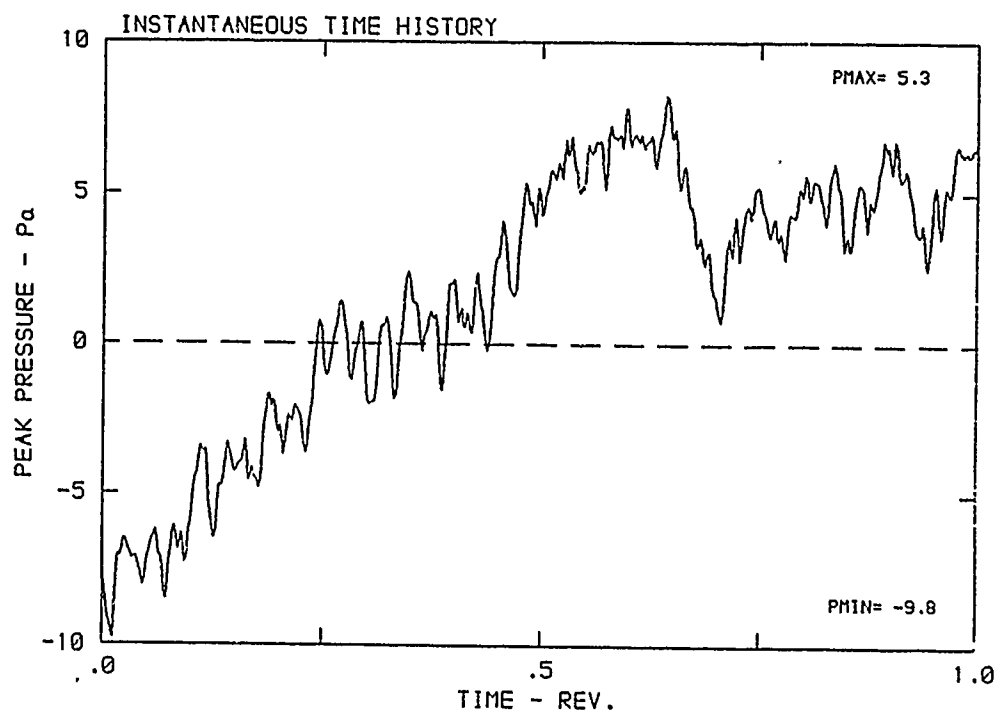
DATA POINT: BN-7    RUN: 55    MP: 6

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



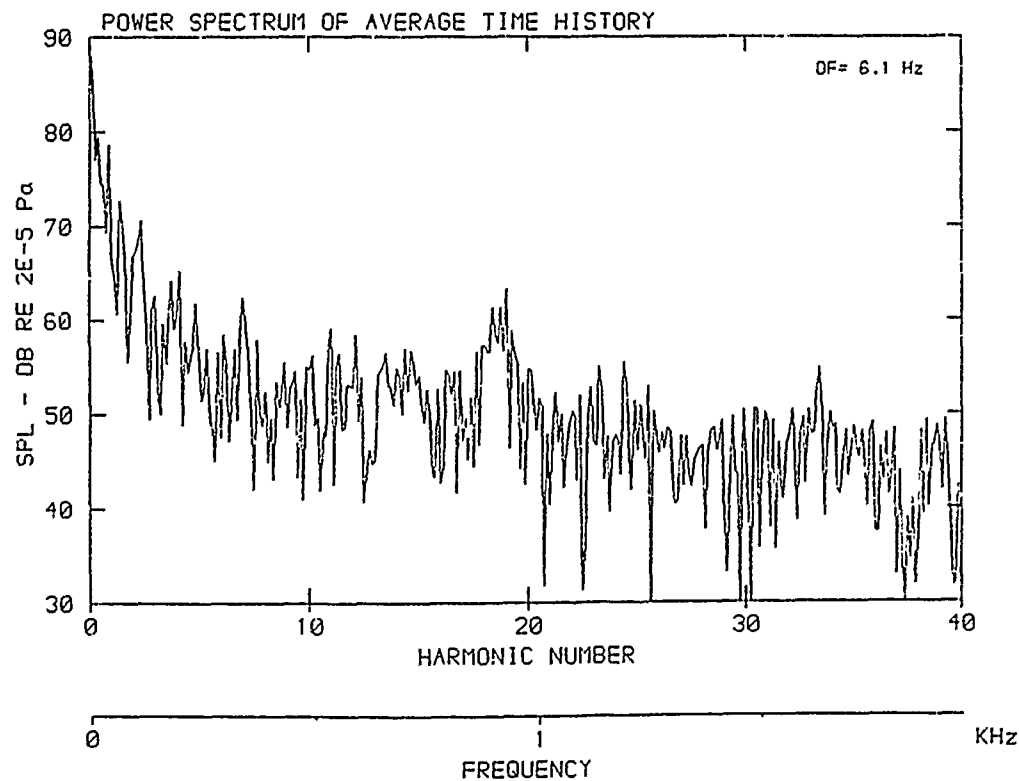
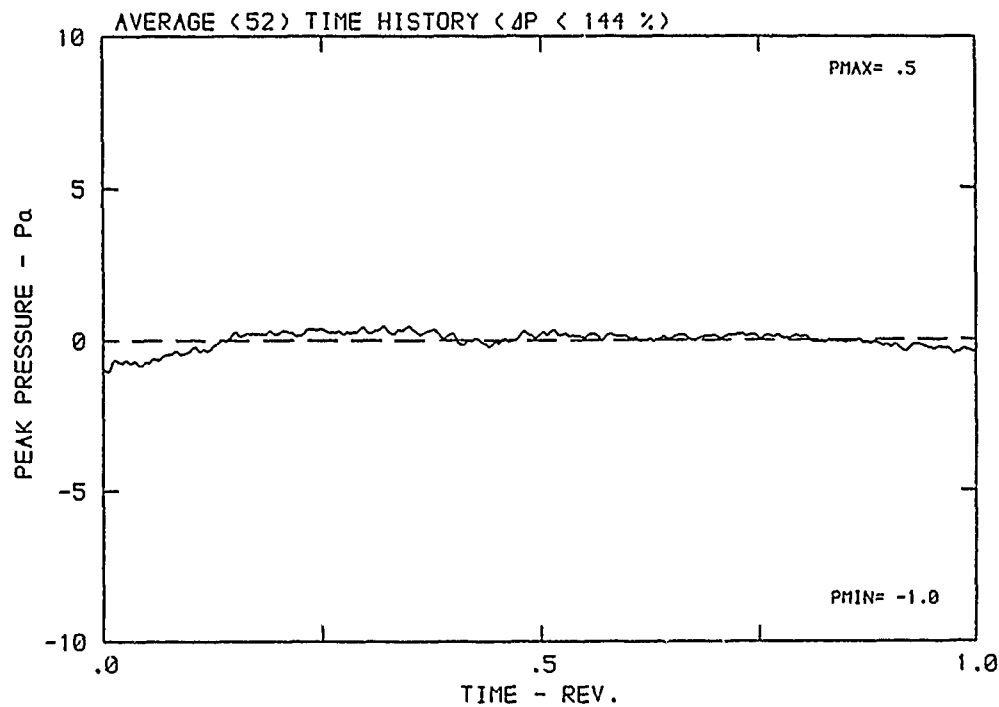
DATA POINT: BN-7      RUN: 55      MP: 7

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



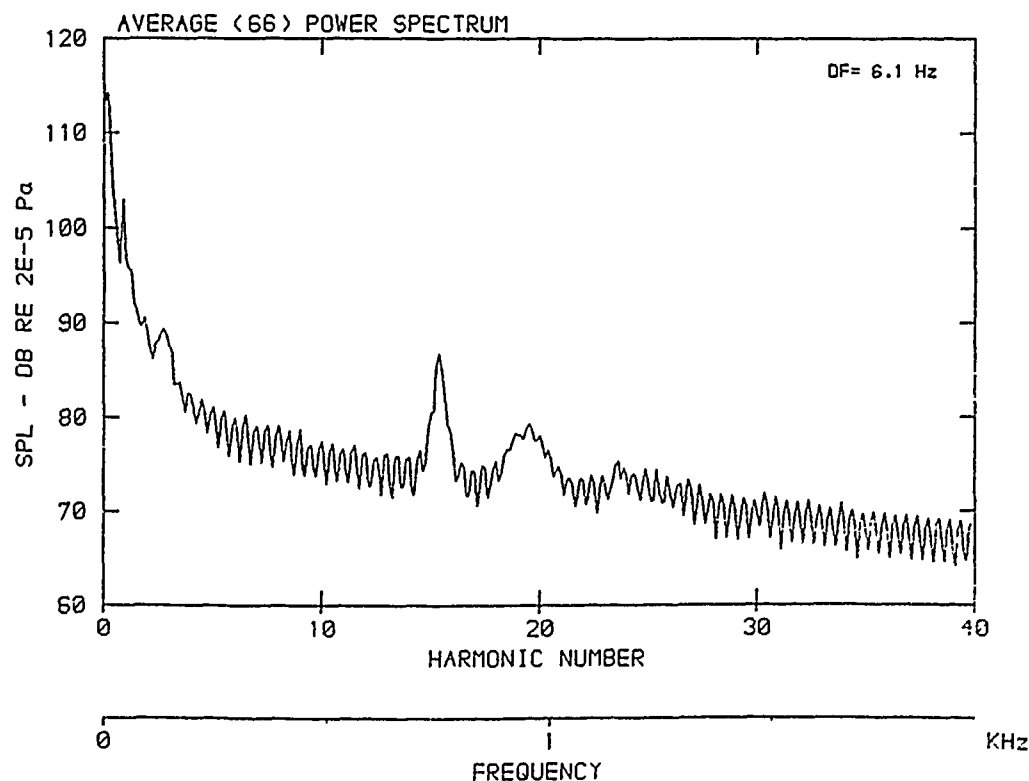
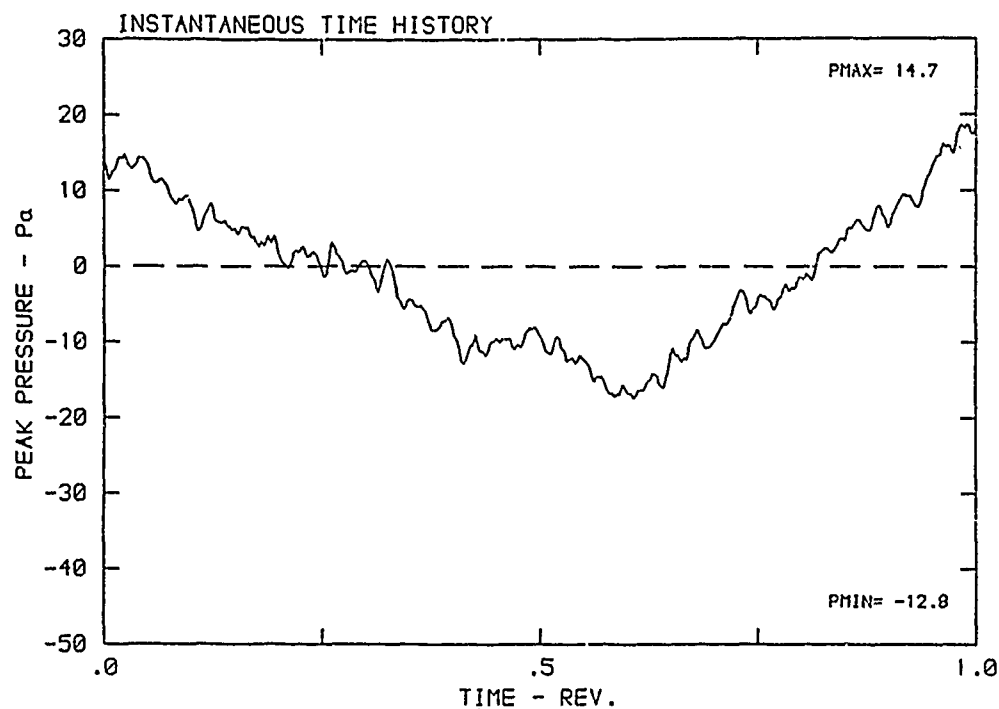
DATA POINT: BN-7      RUN: 55      MP: 7

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



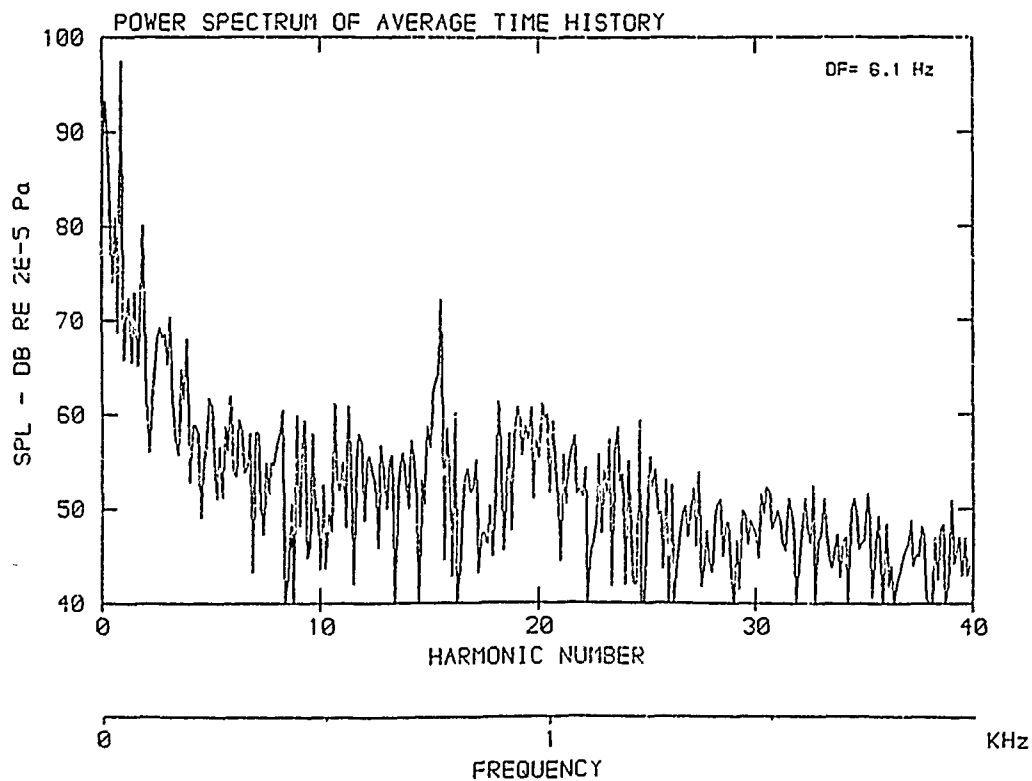
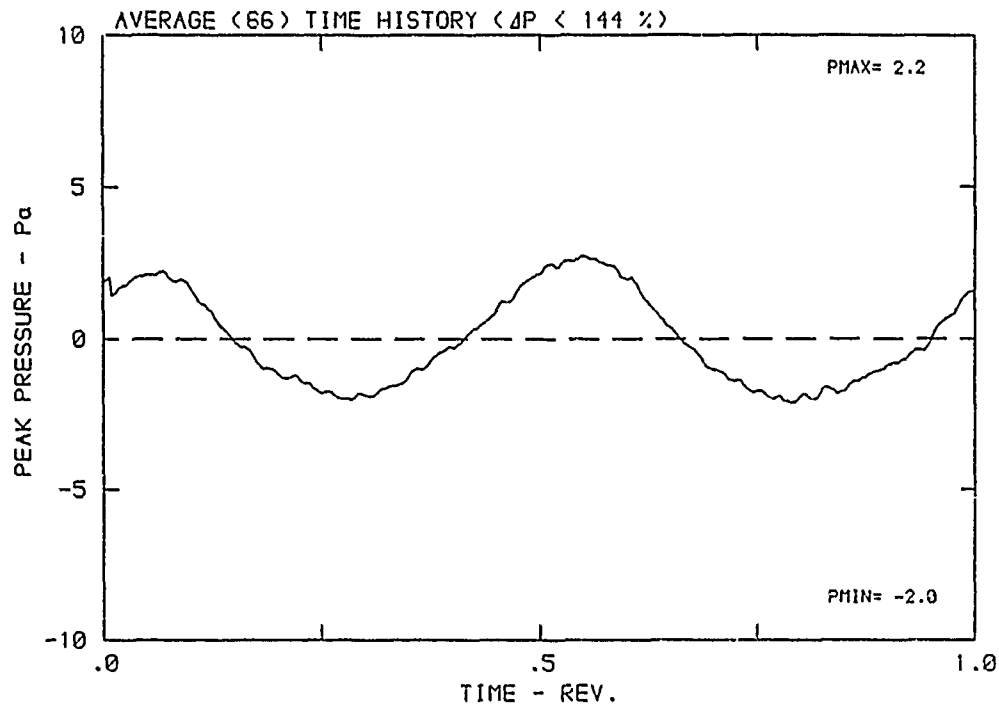
DATA POINT: BN-7    RUN: 55    MP: 9

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



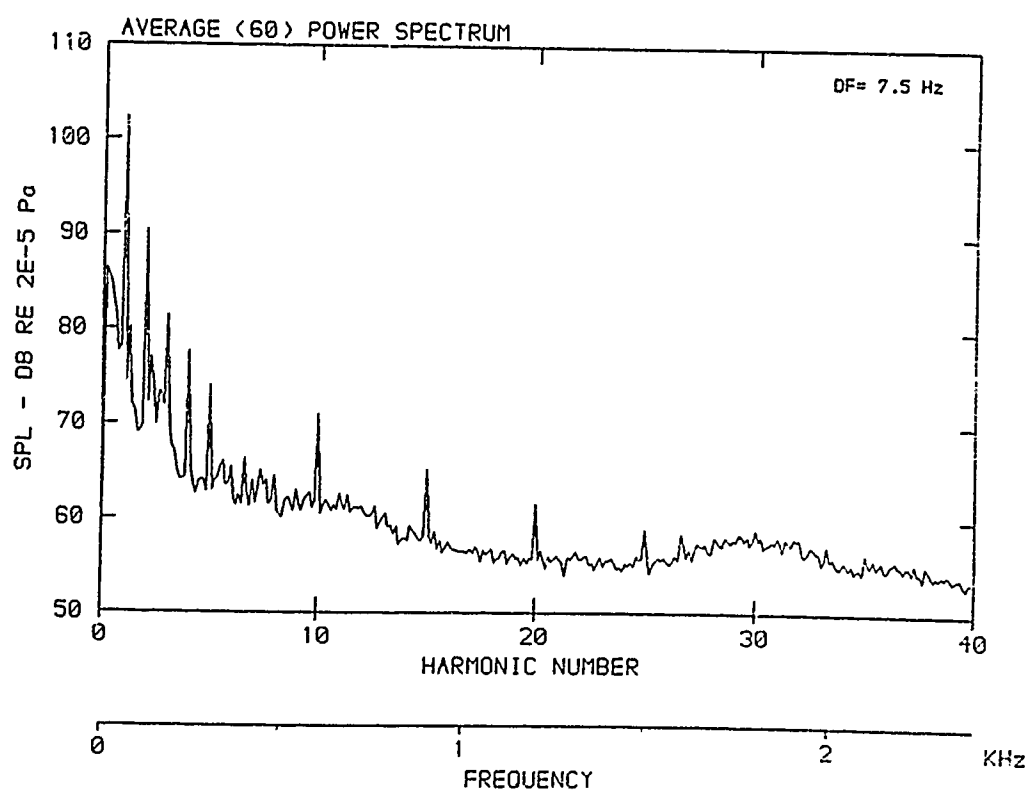
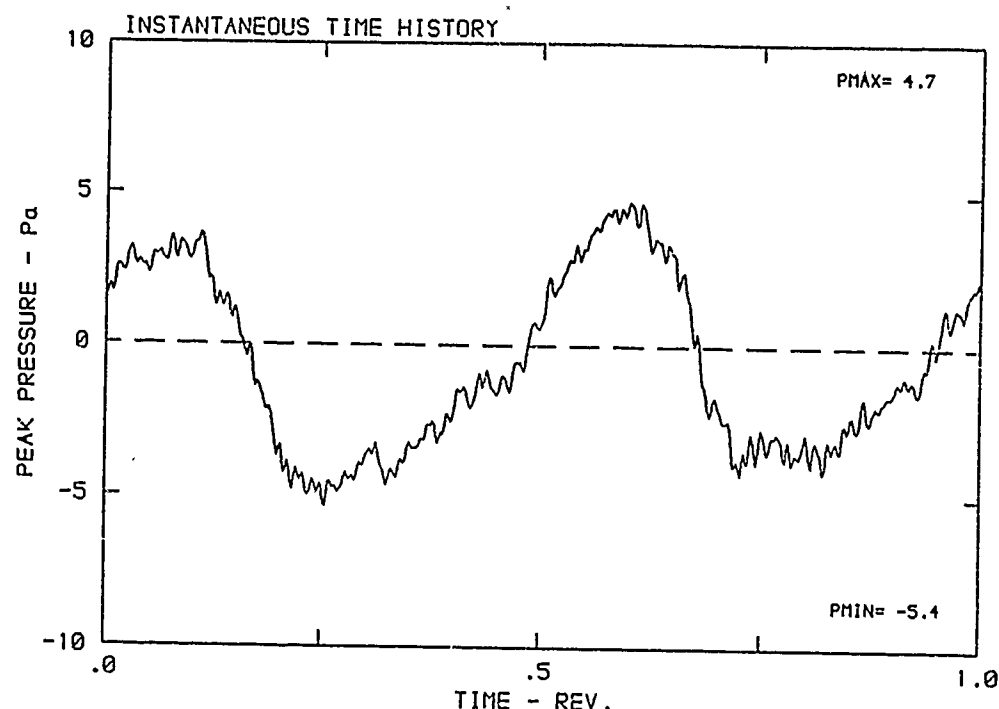
DATA POINT: BN-7      RUN: 55      MP: 9

$\beta$ : 19.9°    MH: .4831    n: 1465 rpm    v/u: .330     $\phi$ : .0°    T: 287.3 K



DATA POINT: CN-1 RUN: 104 MP: 1

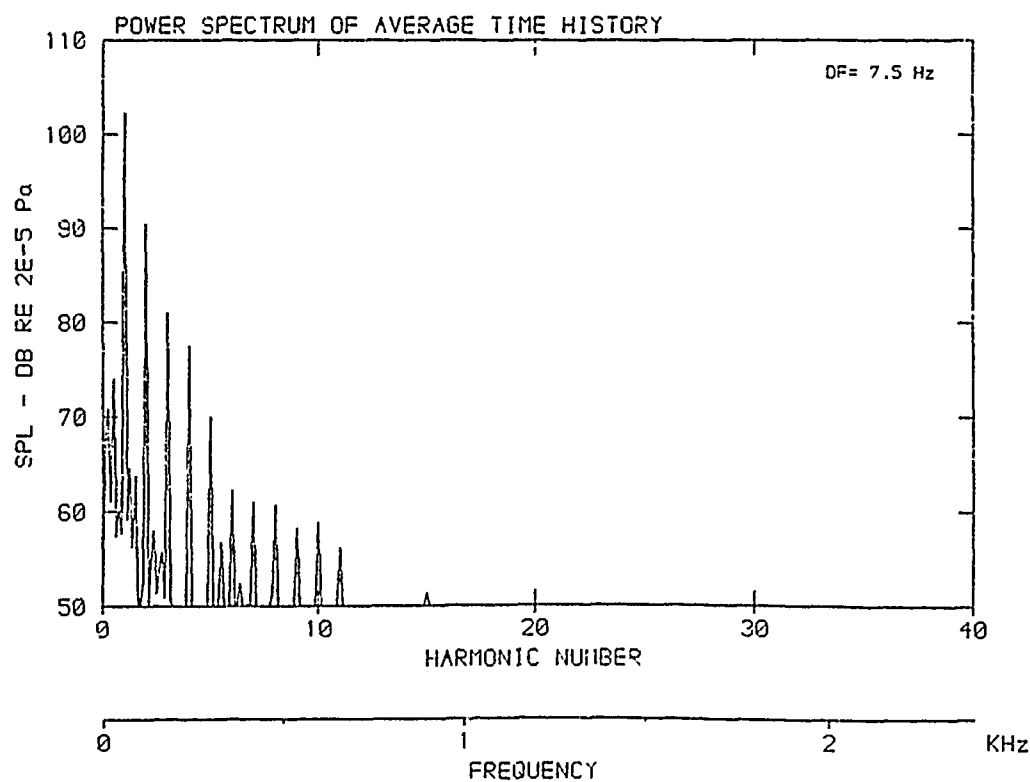
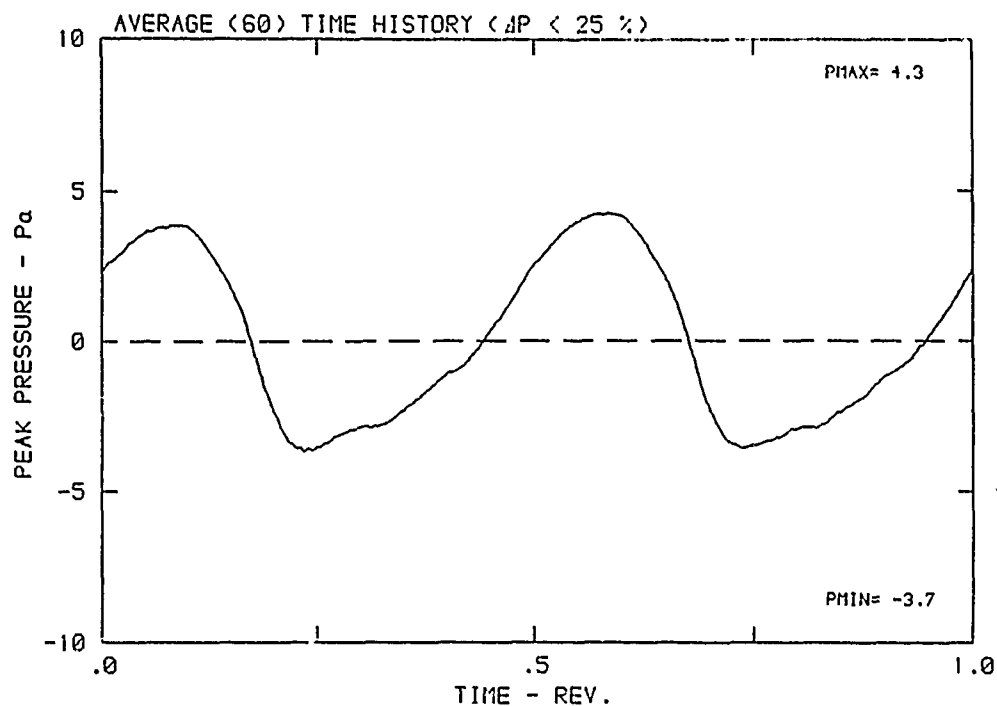
$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K





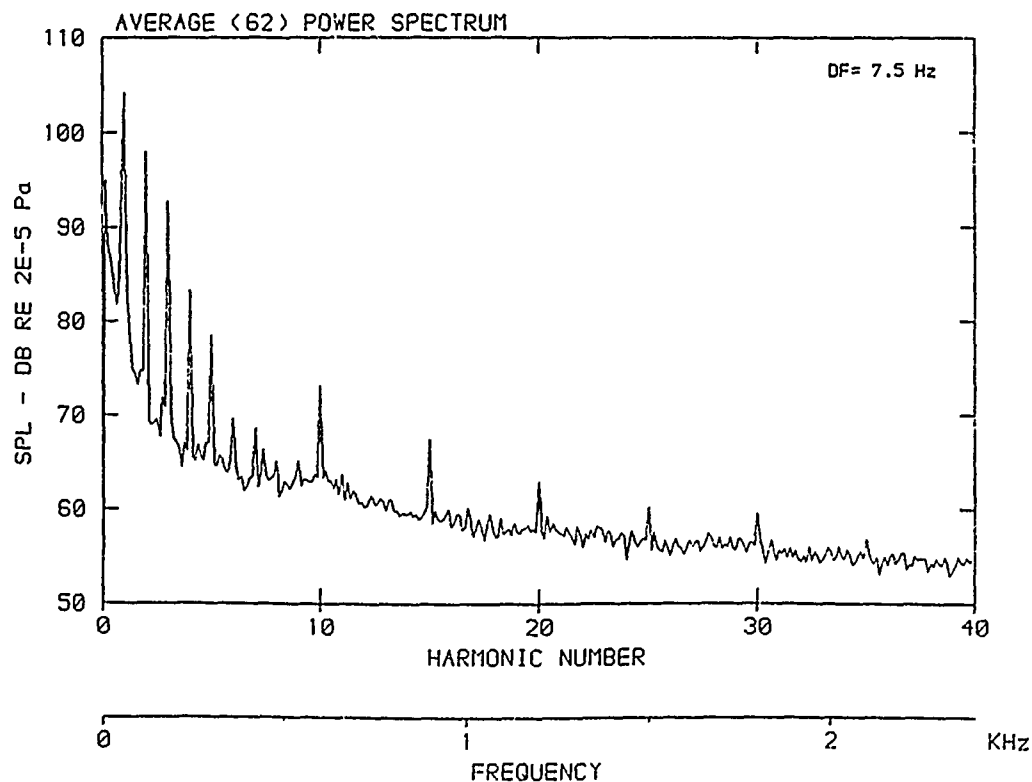
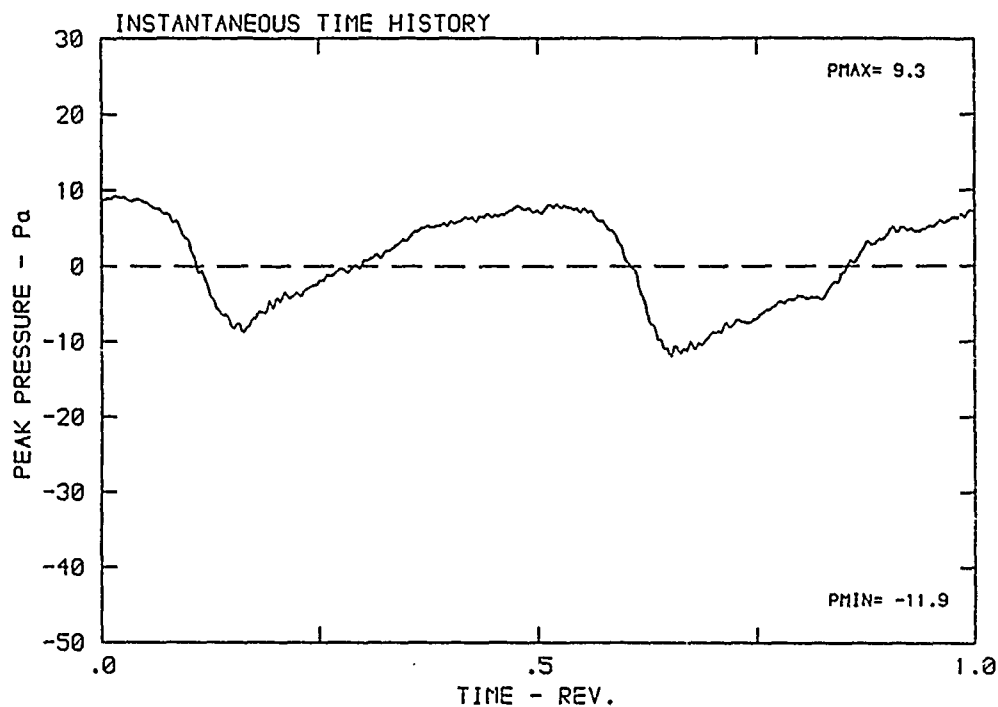
DATA POINT: CN-1 RUN: 104 MP: 1

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



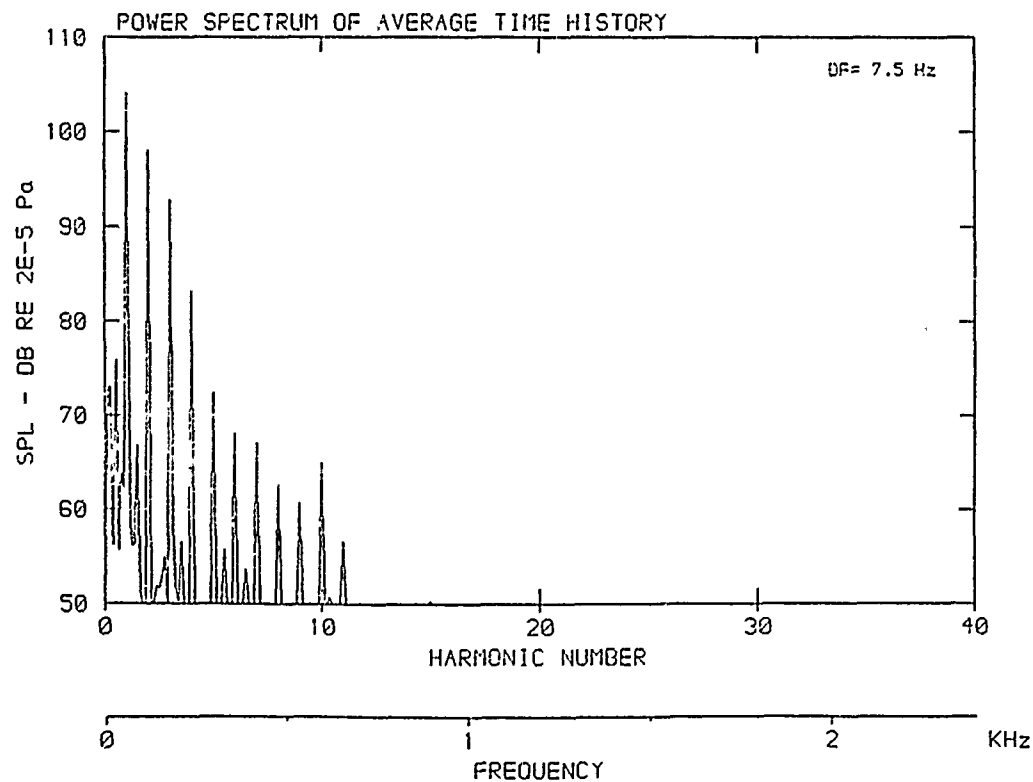
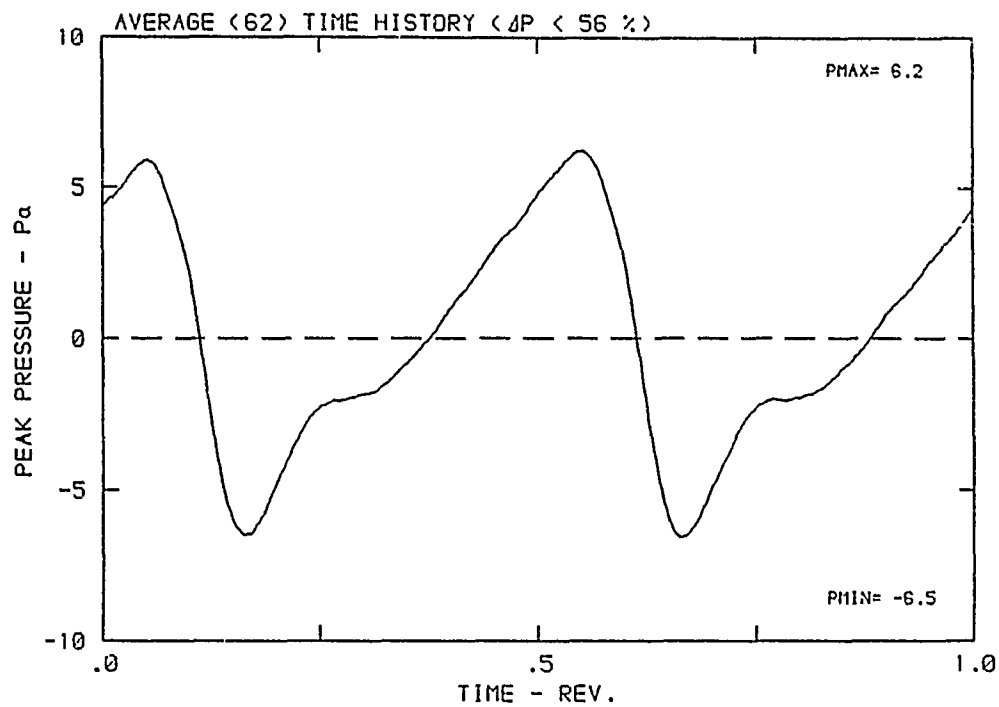
DATA POINT: CN-1 RUN: 104 MP: 2

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



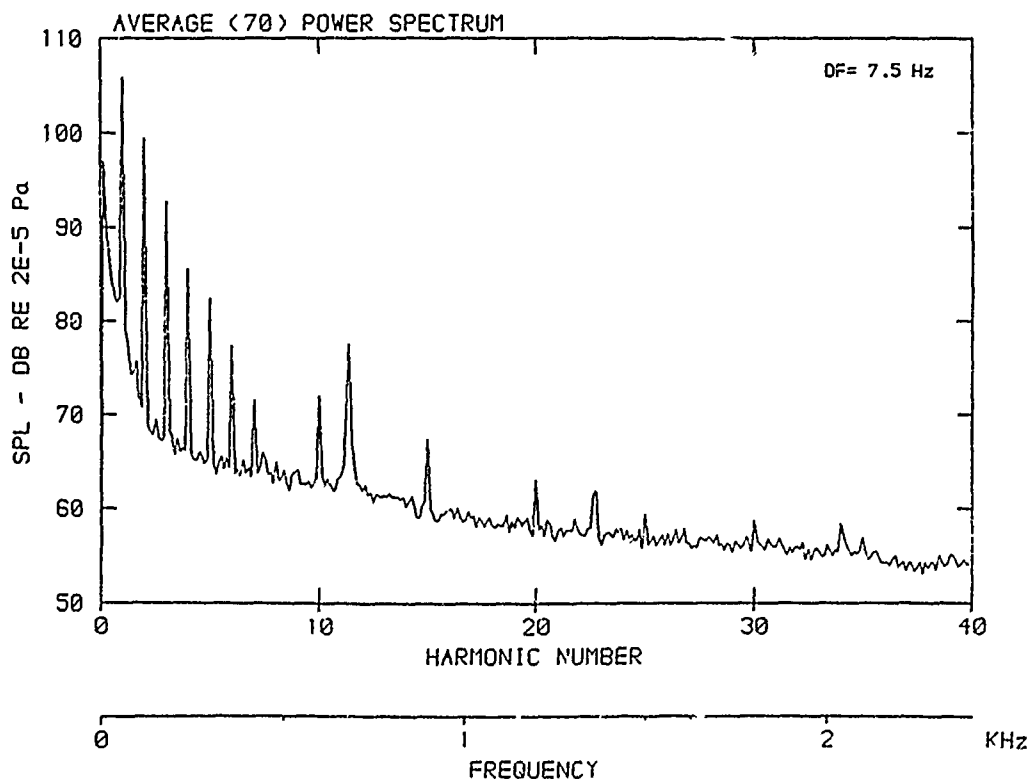
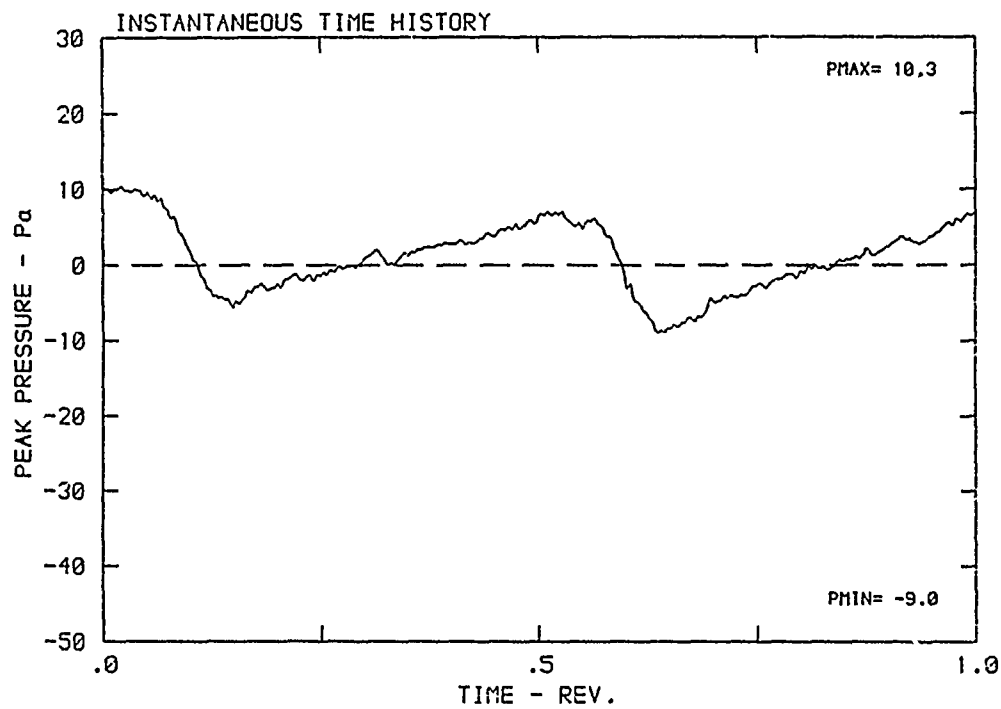
DATA POINT: CN-1      RUN: 104      MP: 2

$\beta$ : 23.7°    MH: .5745    n: 1800 rpm    v/u: .200     $\phi$ : .0°    T: 287.5 K



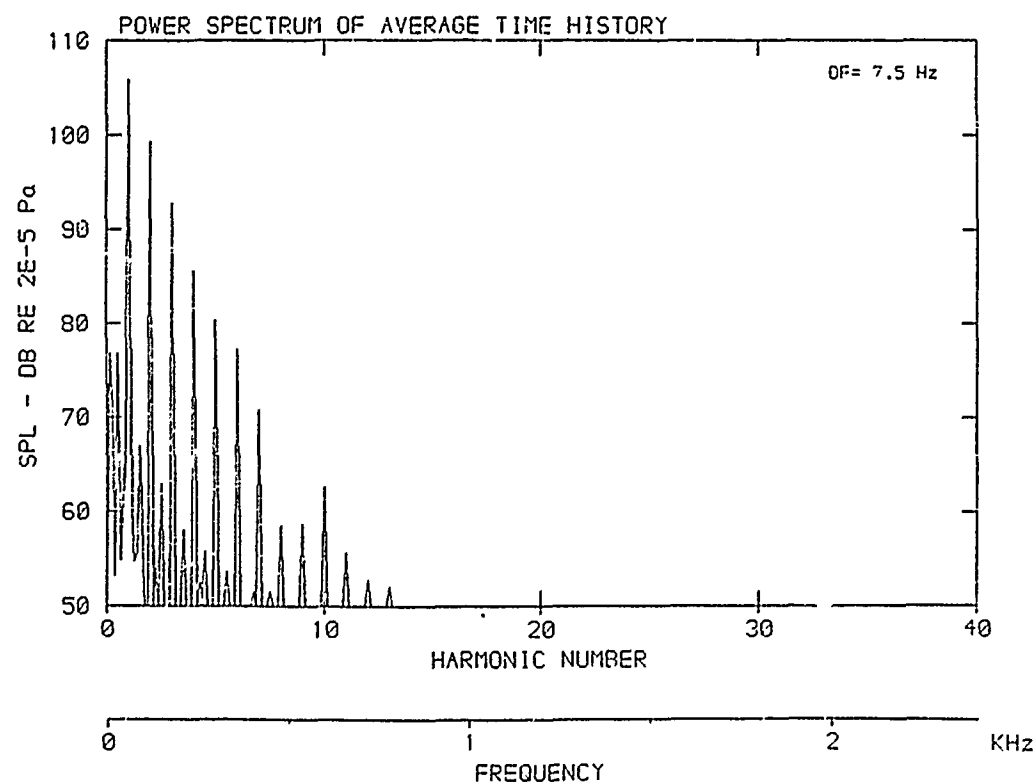
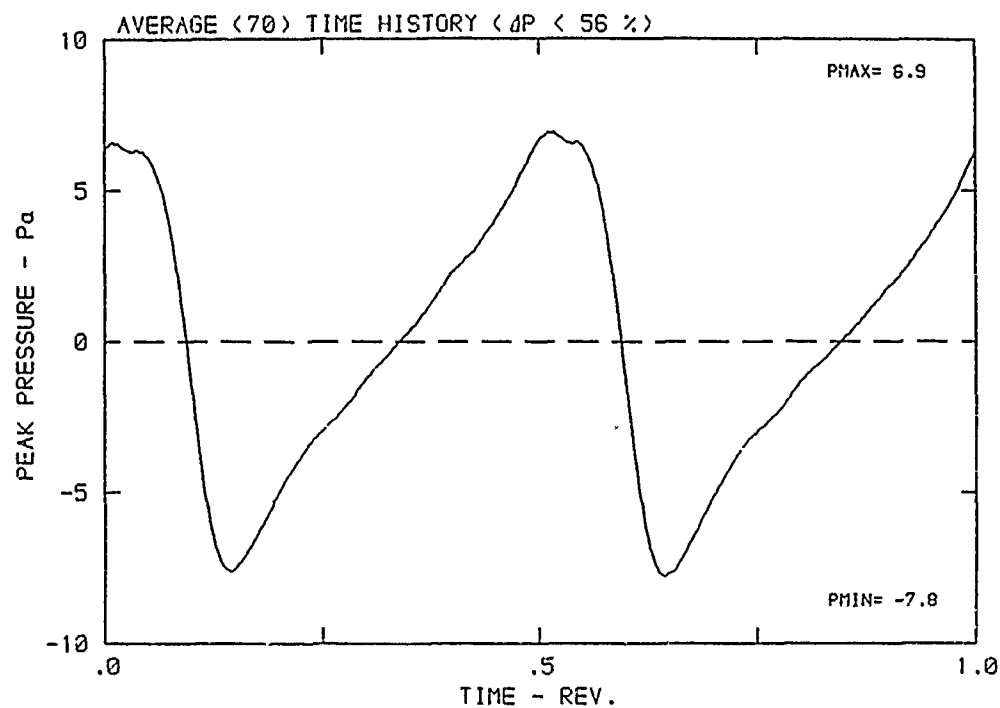
DATA POINT: CN-1 RUN: 104 MP: 3

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 297.5 K



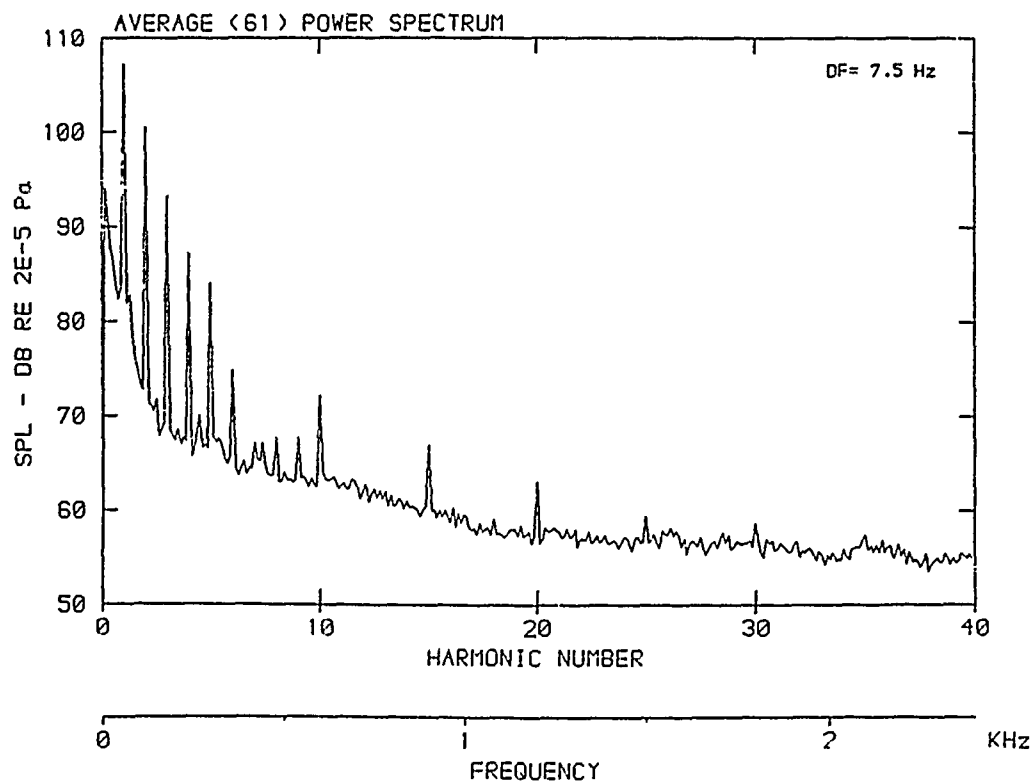
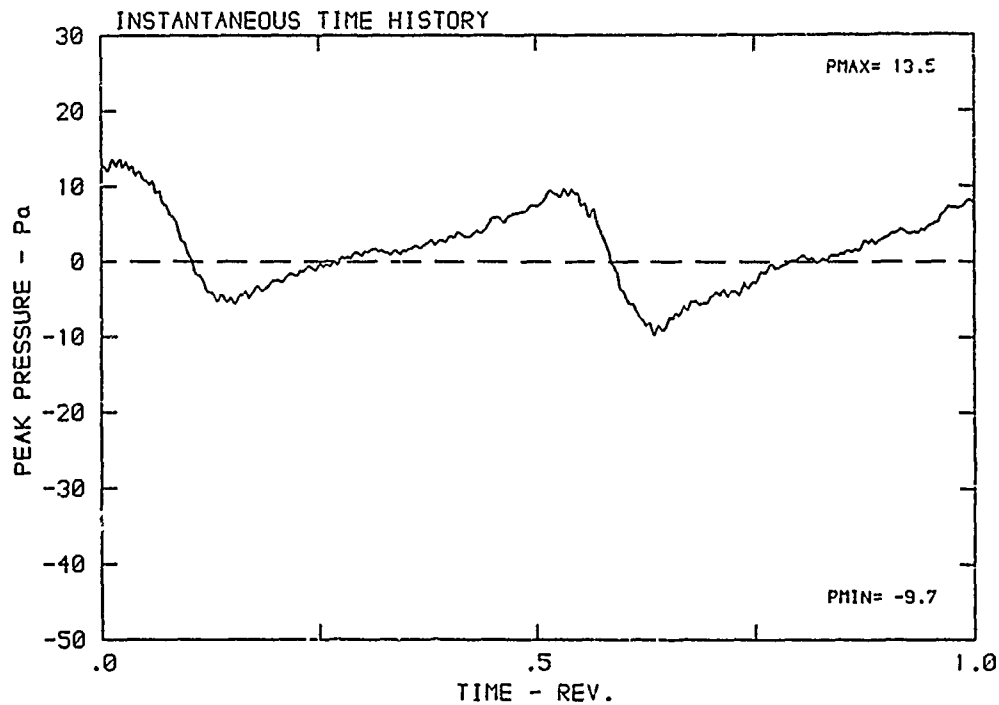
DATA POINT: CN-1      RUN: 104      MP: 3

$\beta$ : 23.7°    MH: .5745    n: 1800 rpm    v/u: .200     $\phi$ : .0°    T: 287.5 K



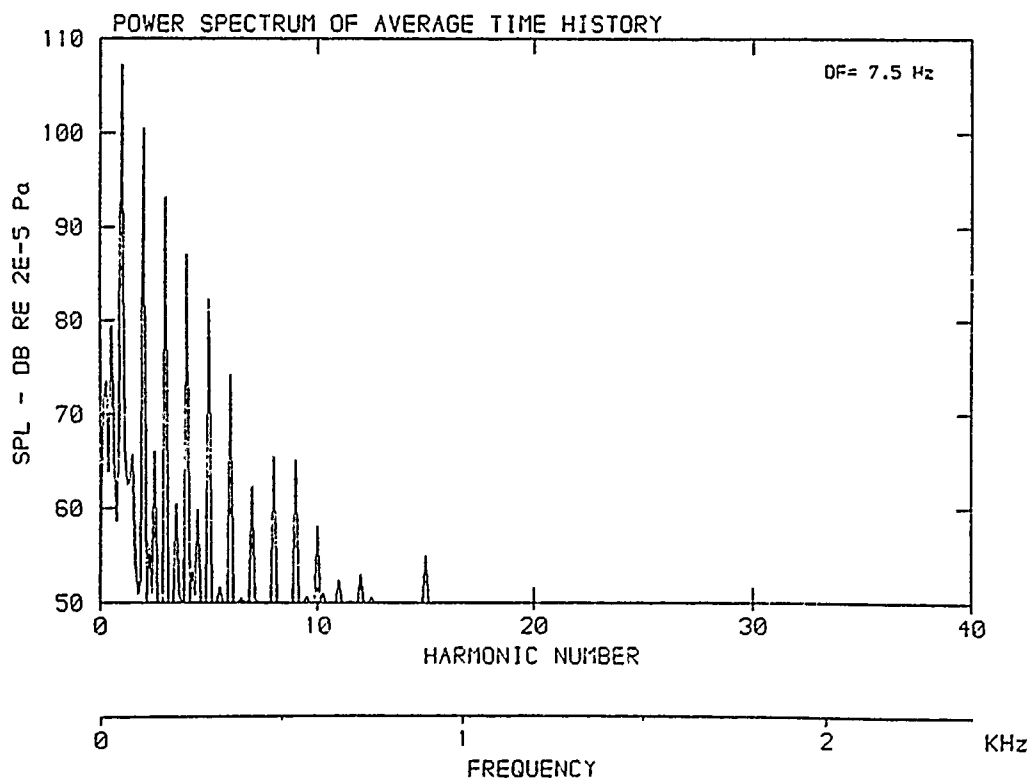
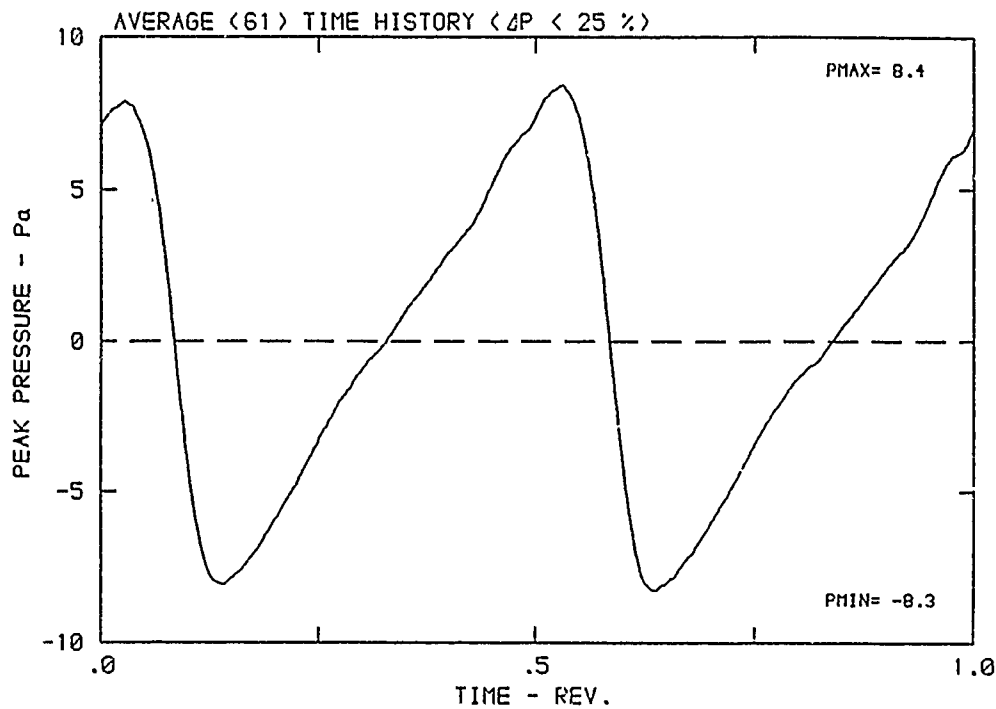
DATA POINT: CN-1 RUN: 104 MP: 4

$\beta$ : 23.7° MH: .5745 n: 1800 rpm  $v/u$ : .200  $\phi$ : .0° T: 287.5 K



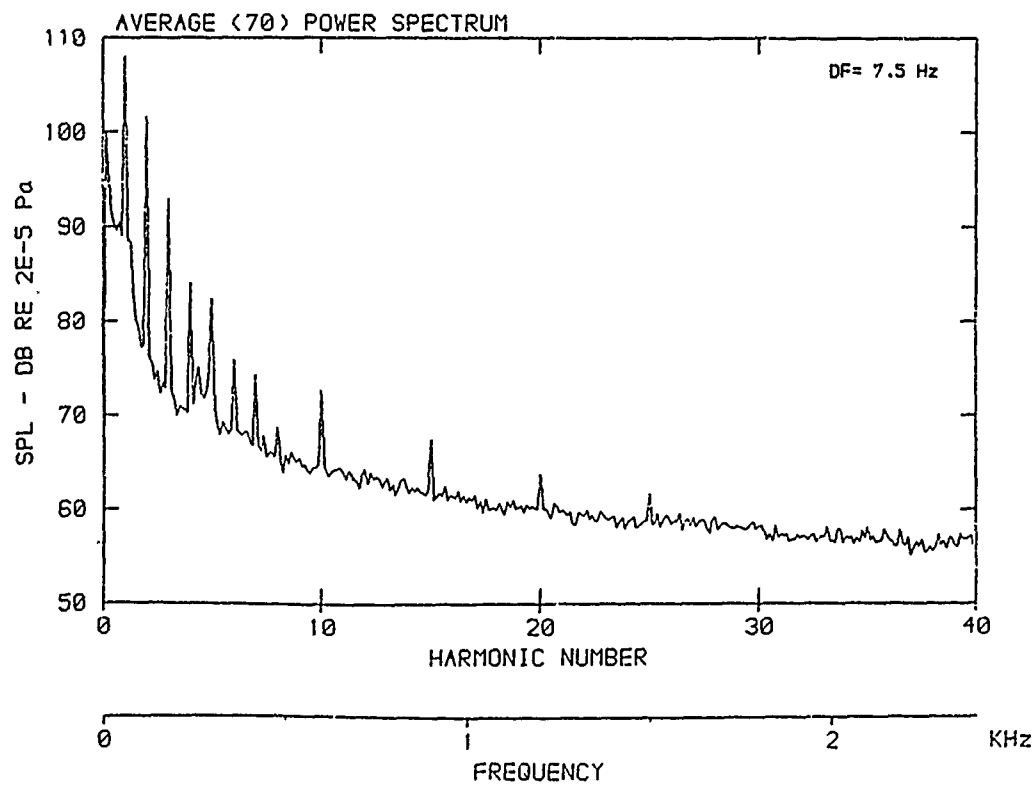
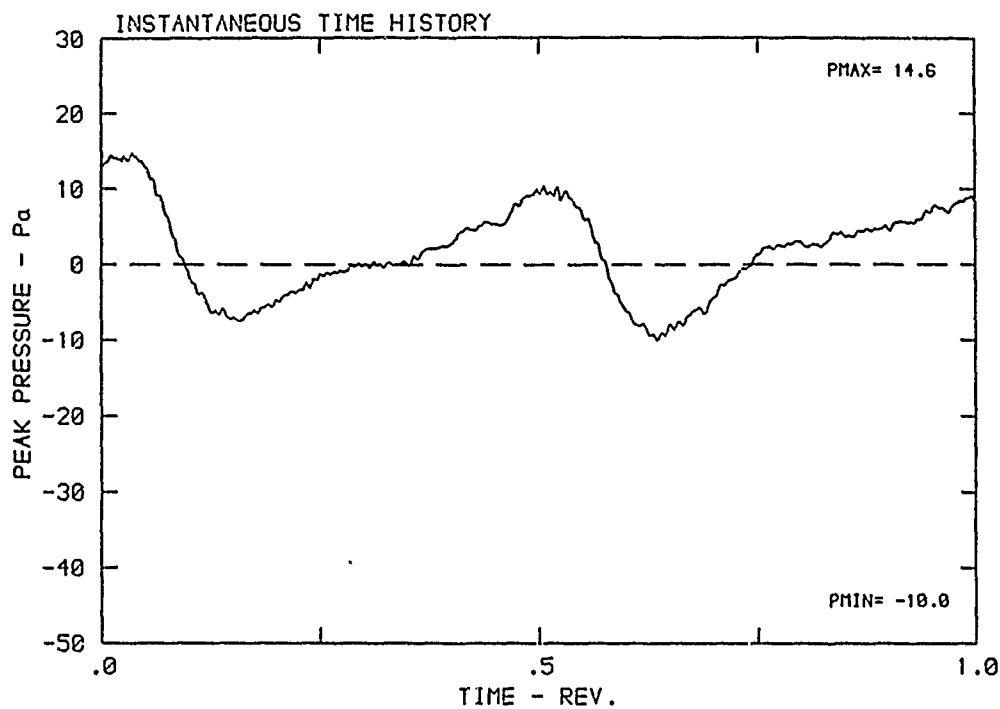
DATA POINT: CN-1    RUN: 104    MP: 4

$\beta$ : 23.7°    MH: .5745    n: 1800 rpm    v/u: .200     $\phi$ : .0°    T: 287.5 K



DATA POINT: CN-1    RUN: 104    MP: 5

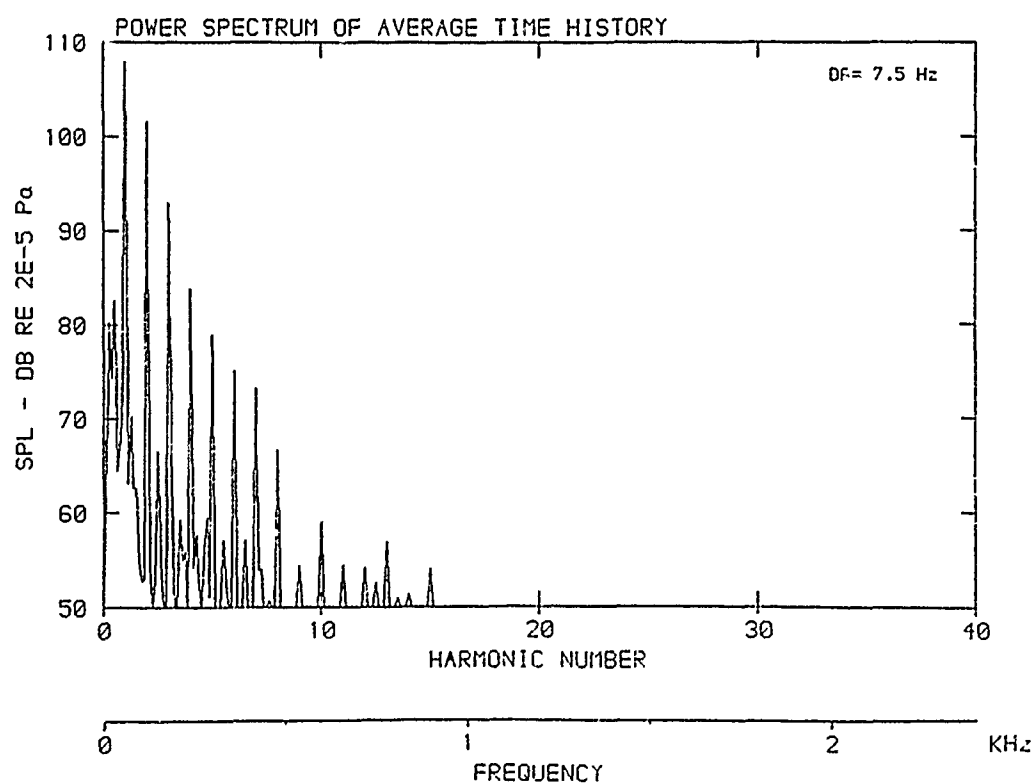
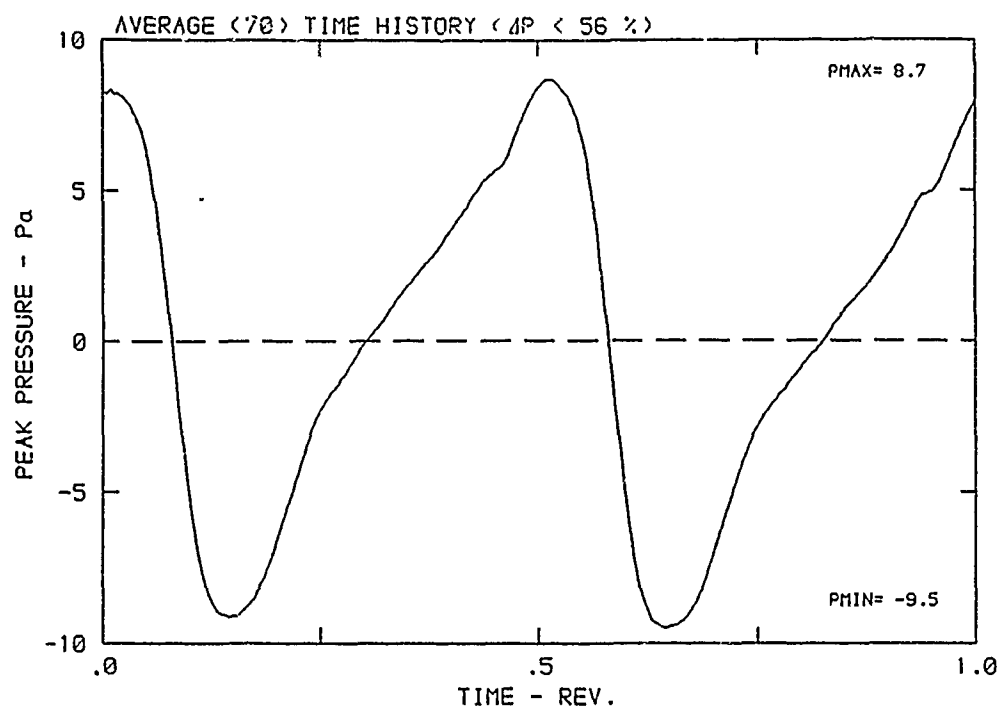
$\beta$ : 23.7°    MH: .5745    n: 1800 rpm    v/u: .200     $\phi$ : .0°    T: 287.5 K





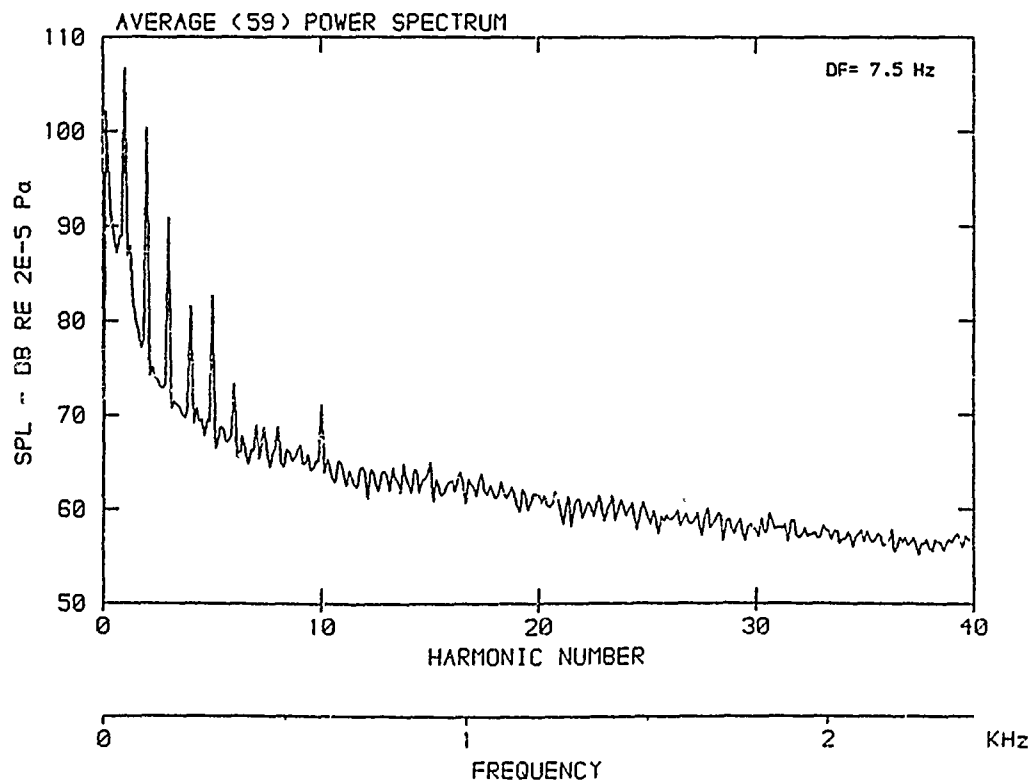
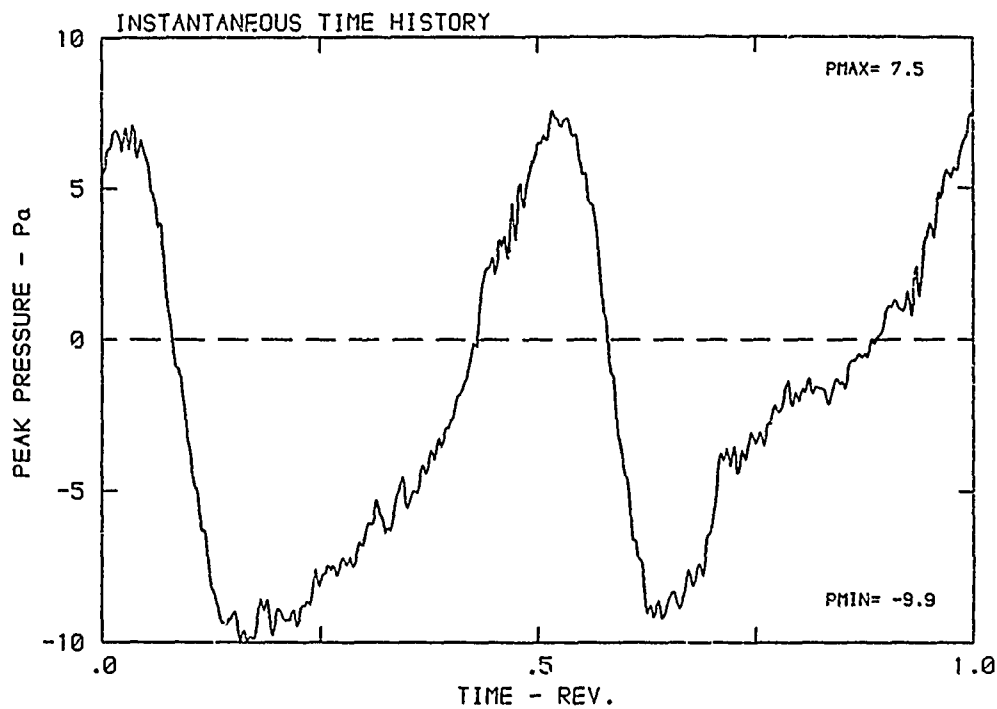
DATA POINT: CN-1    RUN: 104    MP: 5

$\beta$ : 23.7°    MH: .5745    n: 1800 rpm    v/u: .200     $\phi$ : .0°    T: 287.5 K



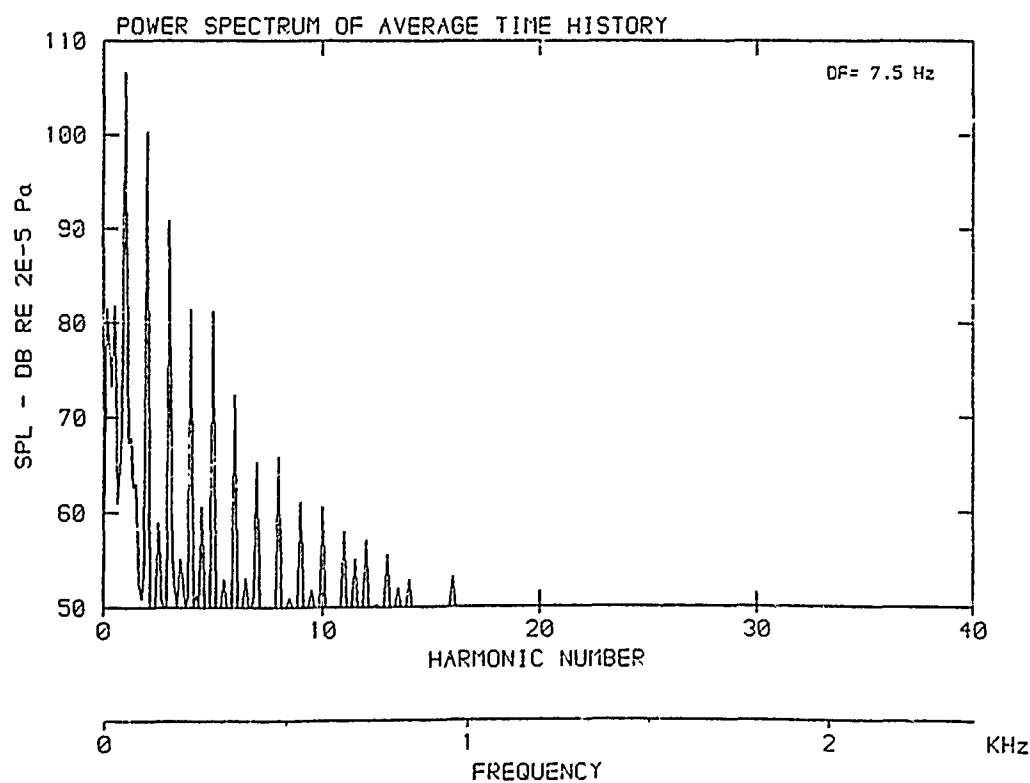
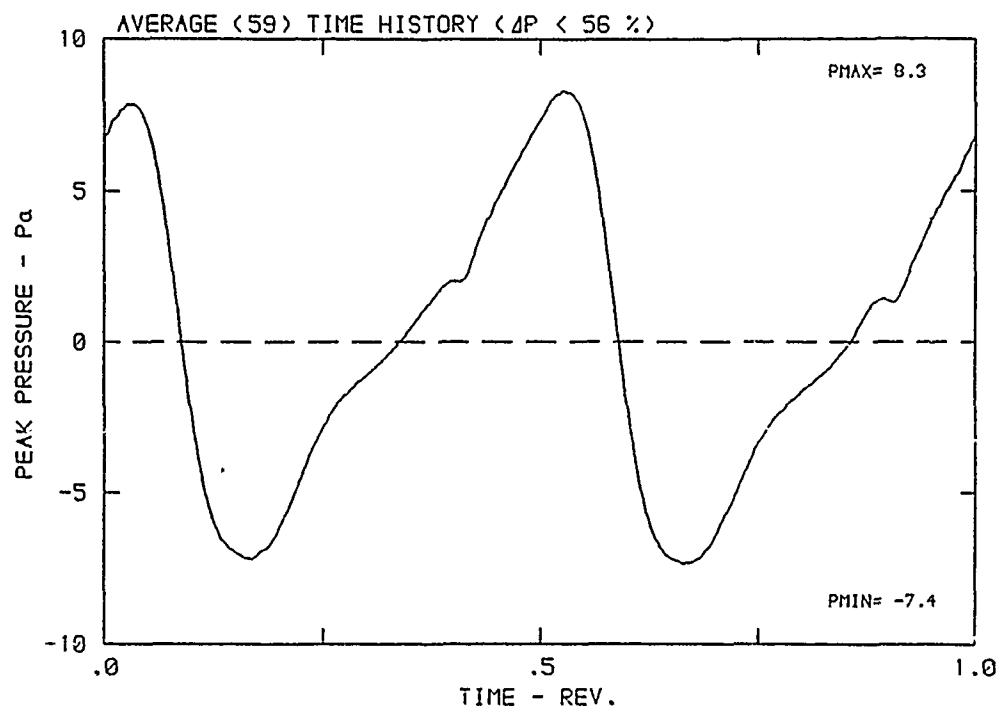
DATA POINT: CN-1 RUN: 104 MP: 6

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



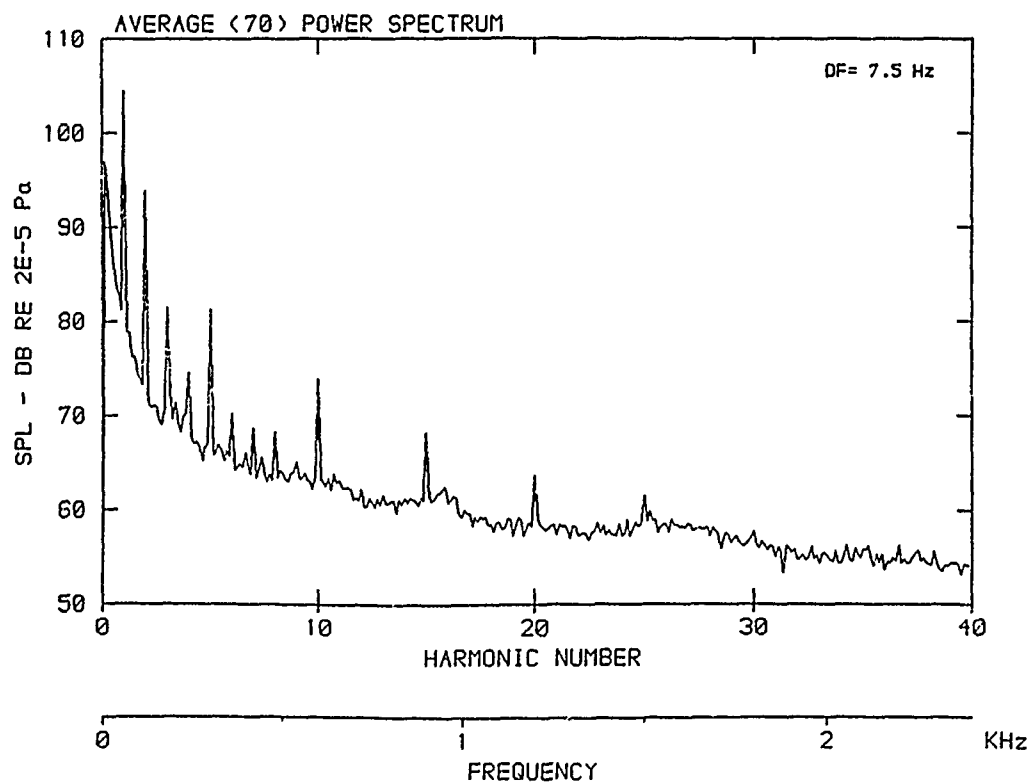
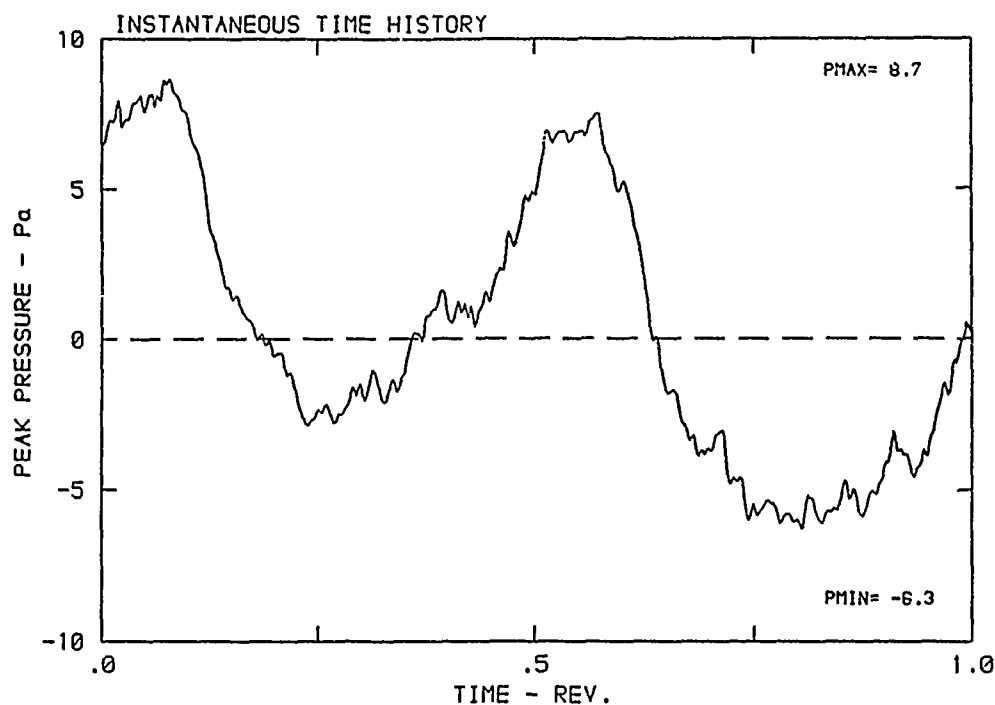
DATA POINT: CN-1 RUN: 104 MP: 6

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



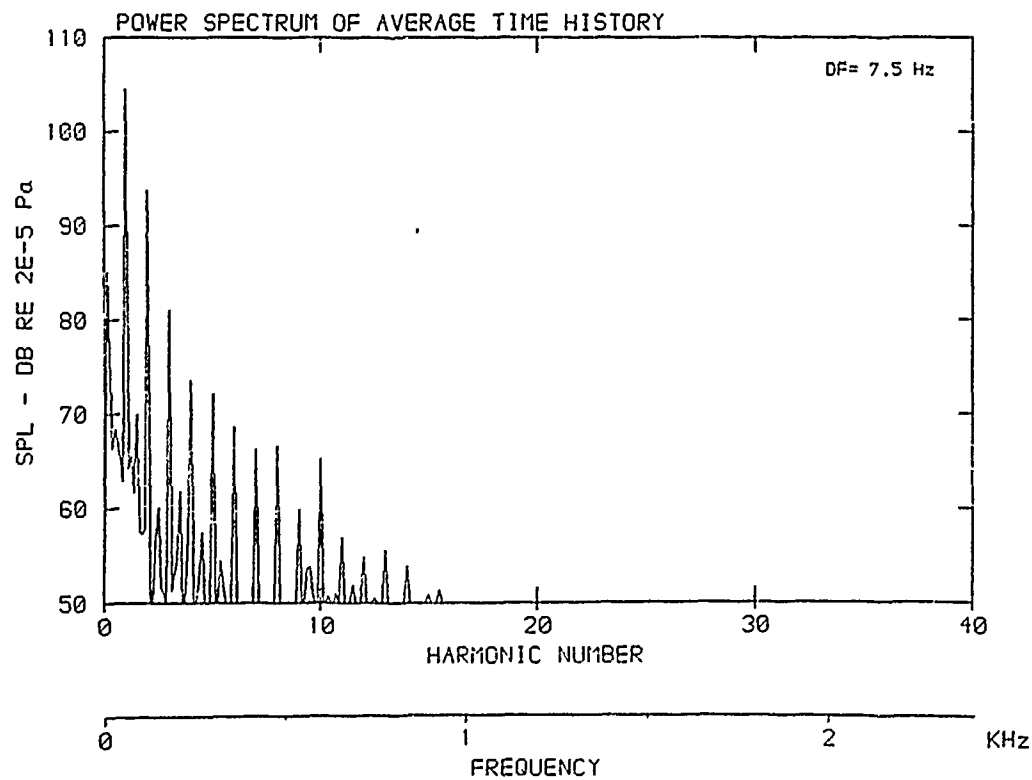
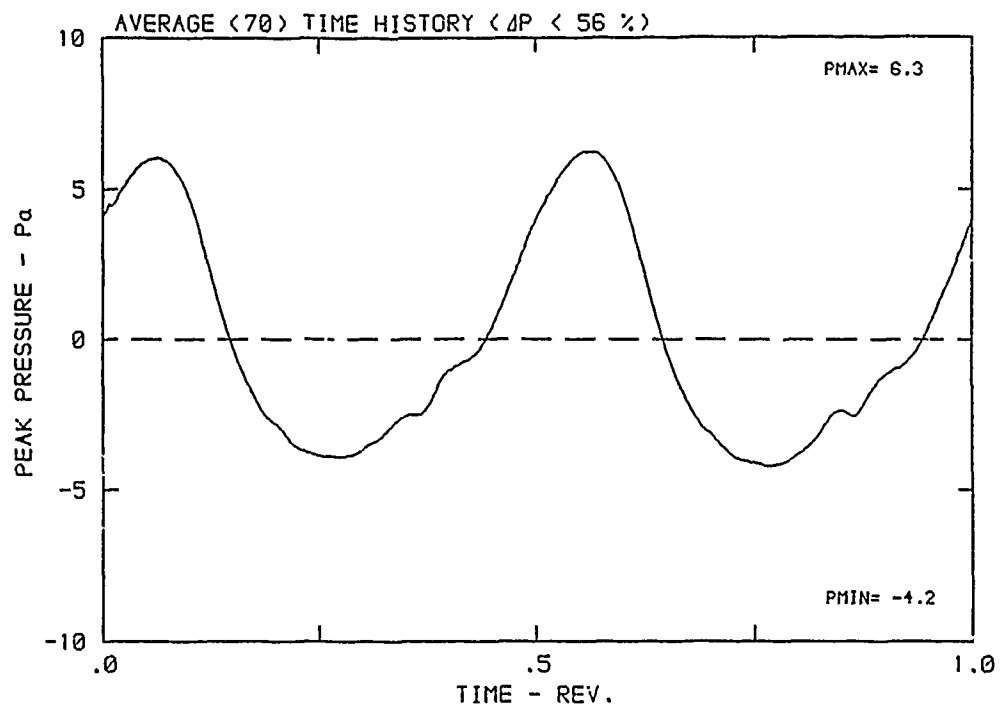
DATA POINT: CN-1 RUN: 104 MP: 7

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



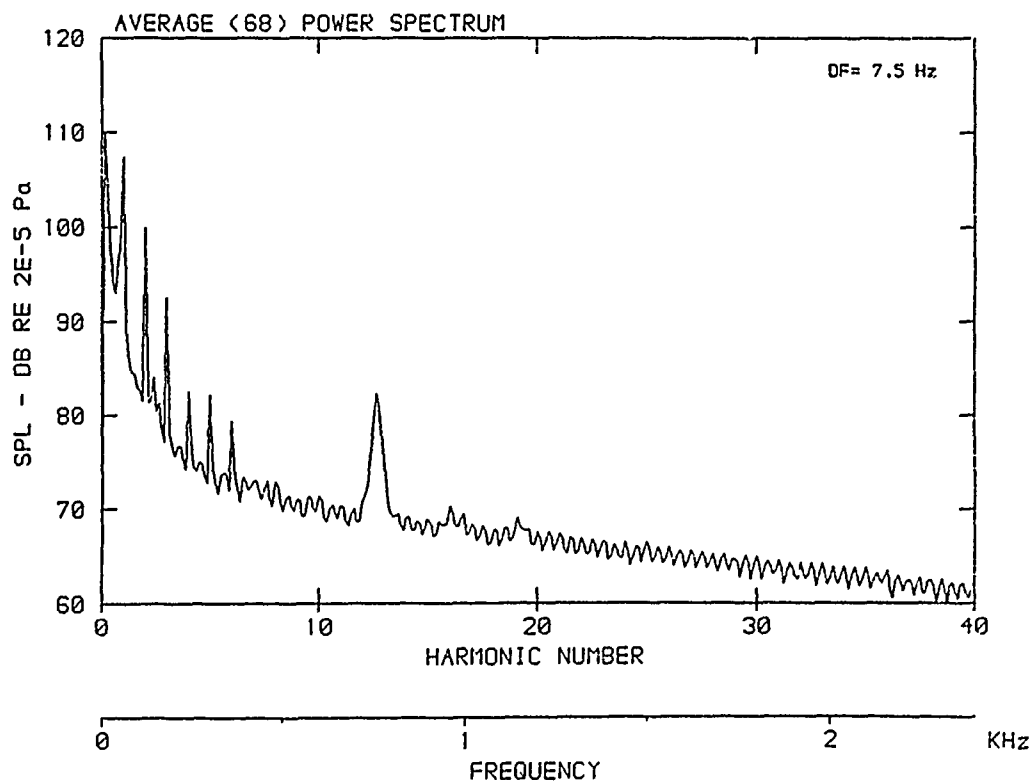
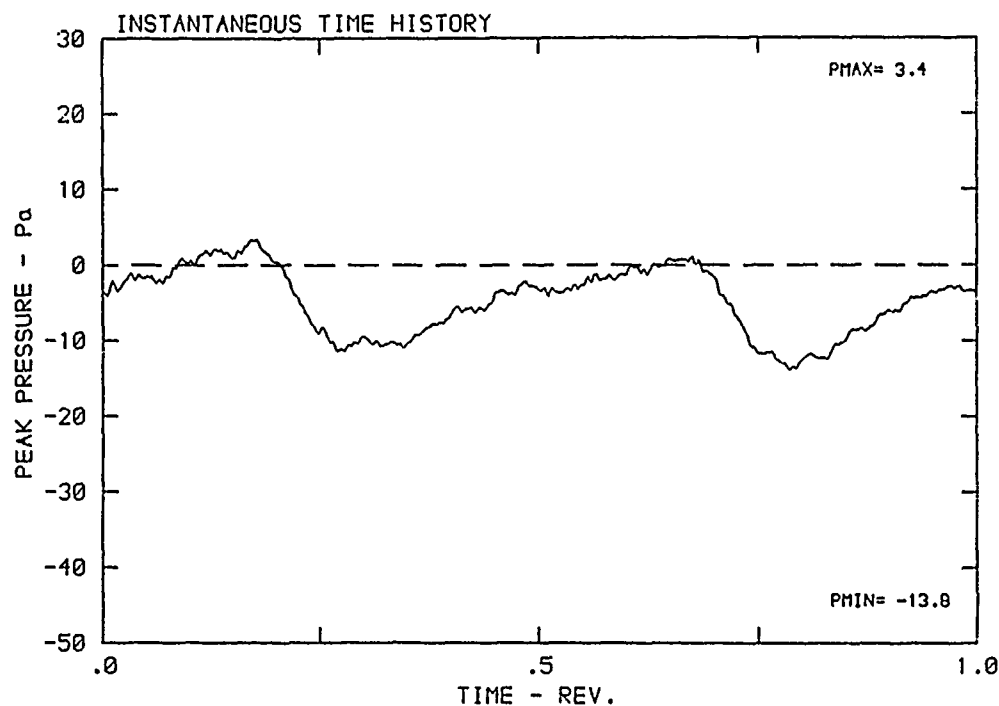
DATA POINT: CN-1 RUN: 104 MP: 7

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



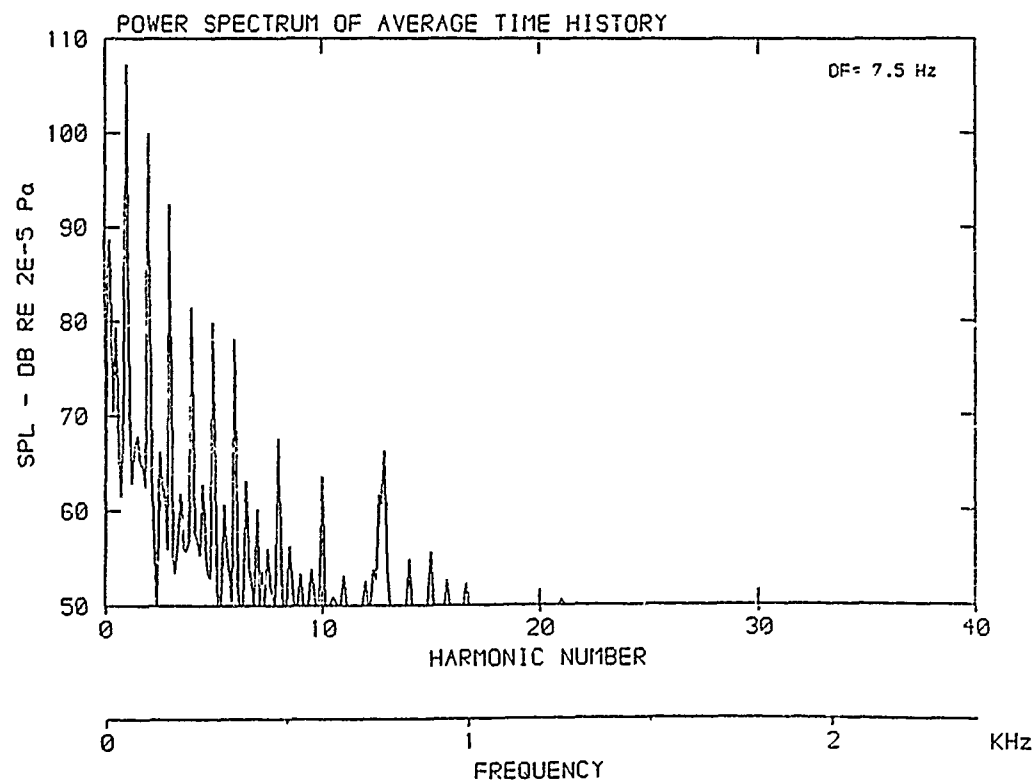
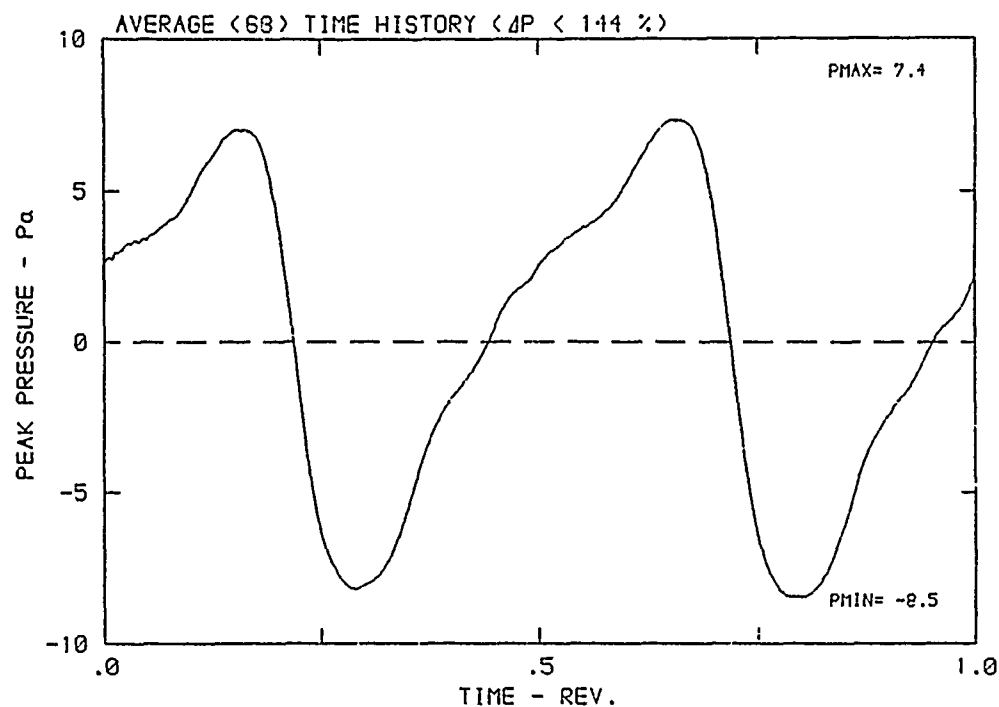
DATA POINT: CN-1 RUN: 104 MP: 9

$\beta$ : 23.7° MH: .5745 n: 1800 rpm v/u: .200  $\phi$ : .0° T: 287.5 K



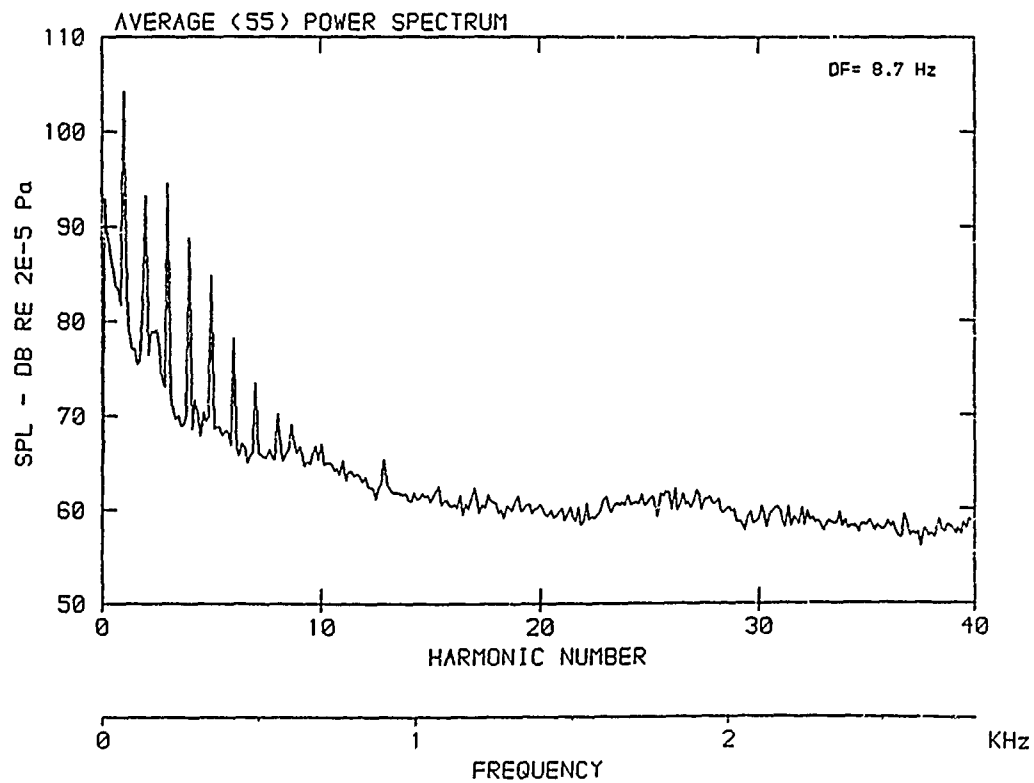
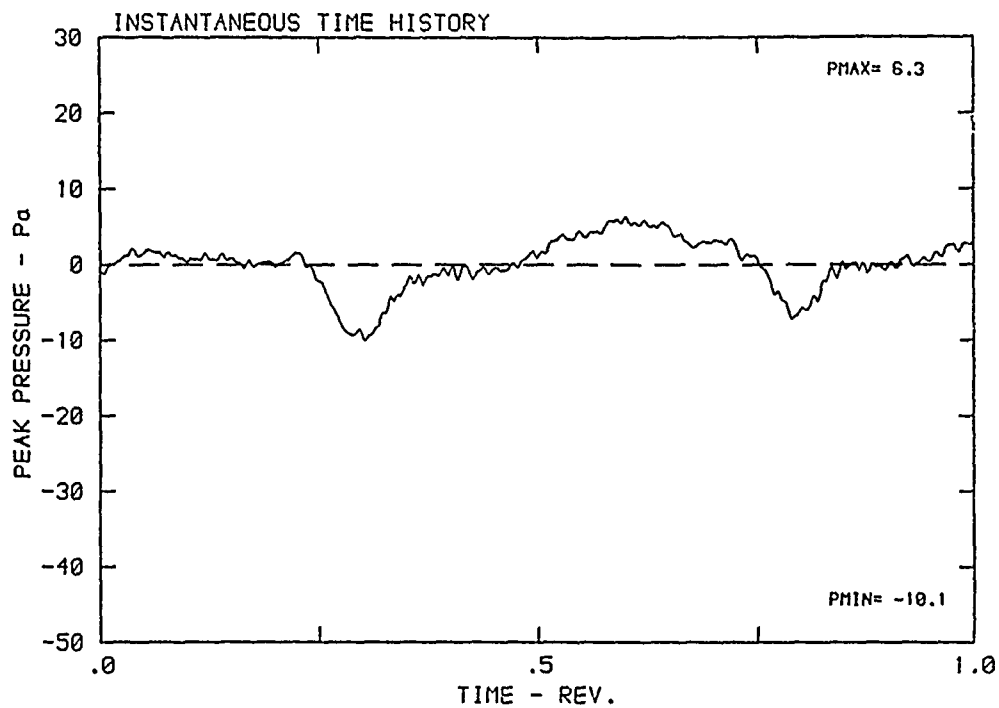
DATA POINT: CN-1    RUN: 104    MP: 9

$\beta$ : 23.7°    MH: .5745    n: 1800 rpm    v/u: .200     $\phi$ : .0°    T: 237.5 K



DATA POINT: CN-2 RUN: 103 MP: 1

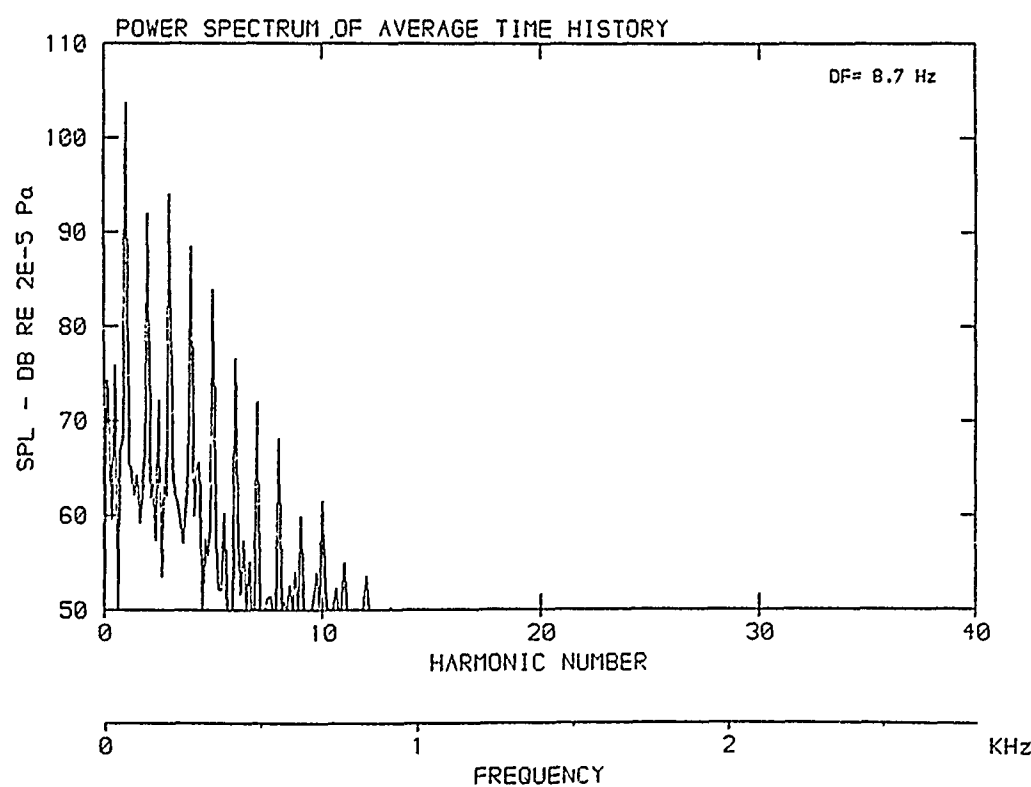
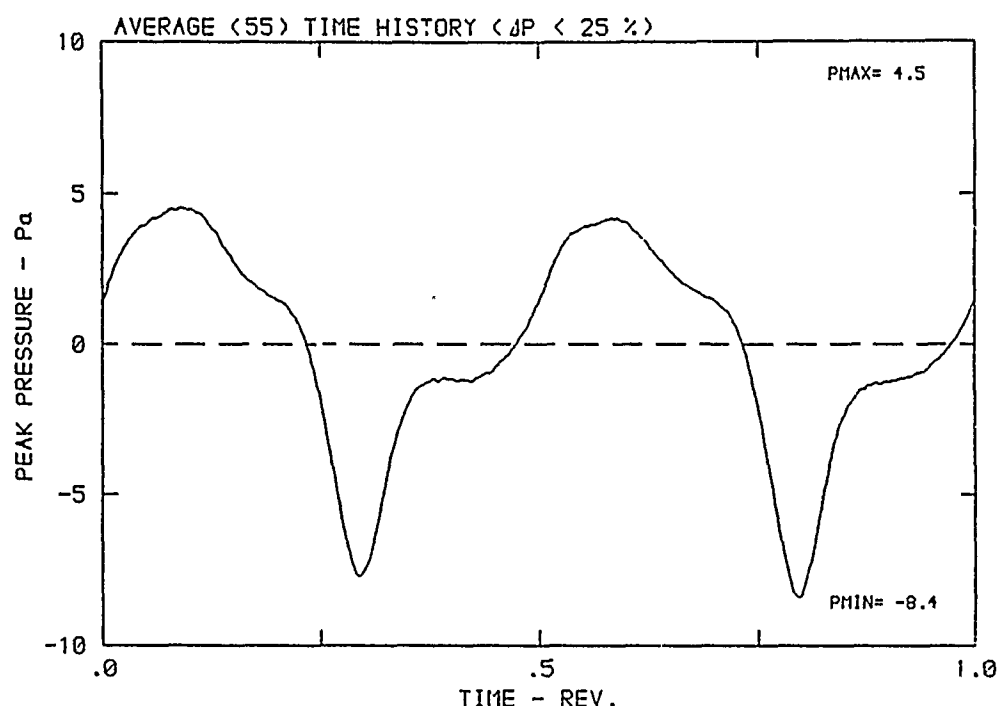
$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K





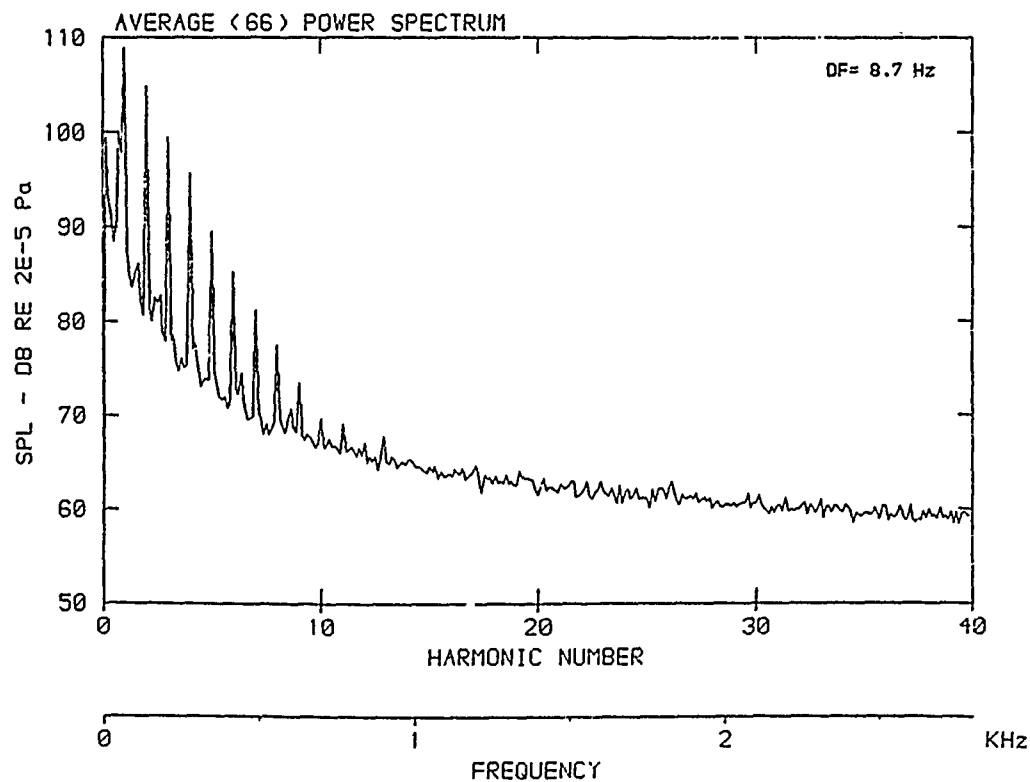
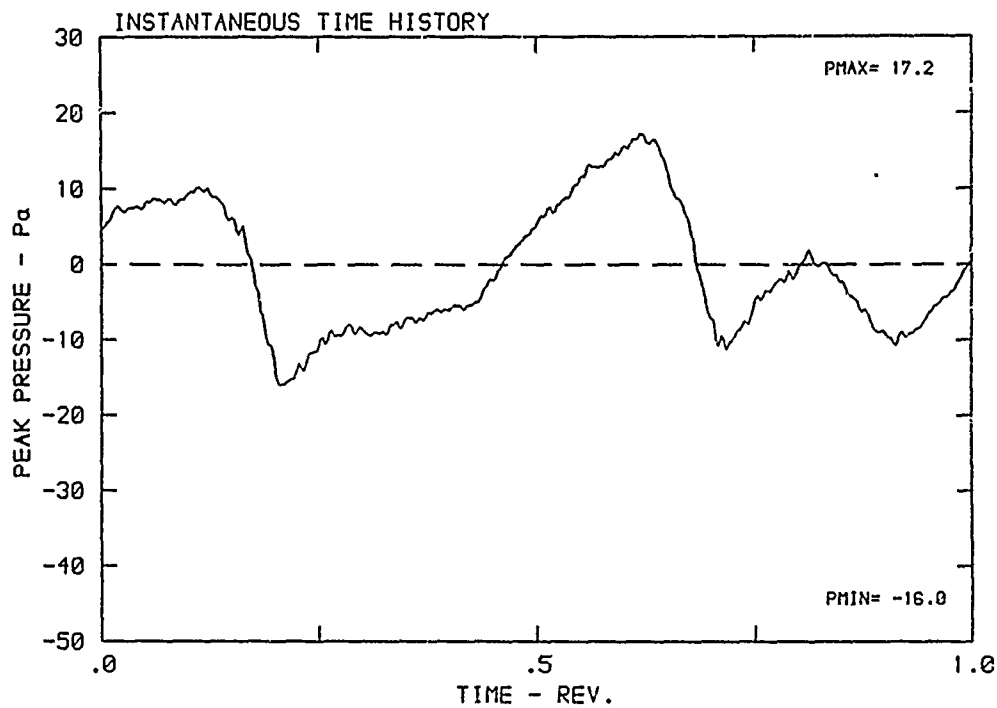
DATA POINT: CN-2    RUN: 103    MP: 1

$\beta$ : 23.7°    MH: .6705    n: 2100 rpm     $v/u$ : .202     $\phi$ : .0°    T: 287.5 K



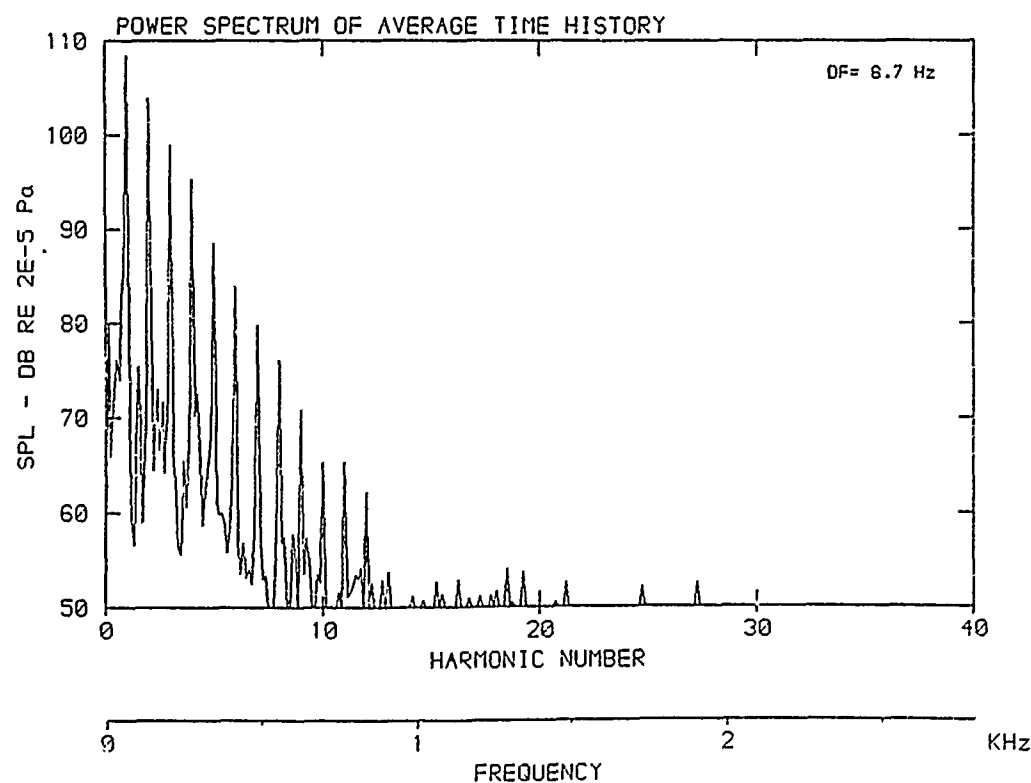
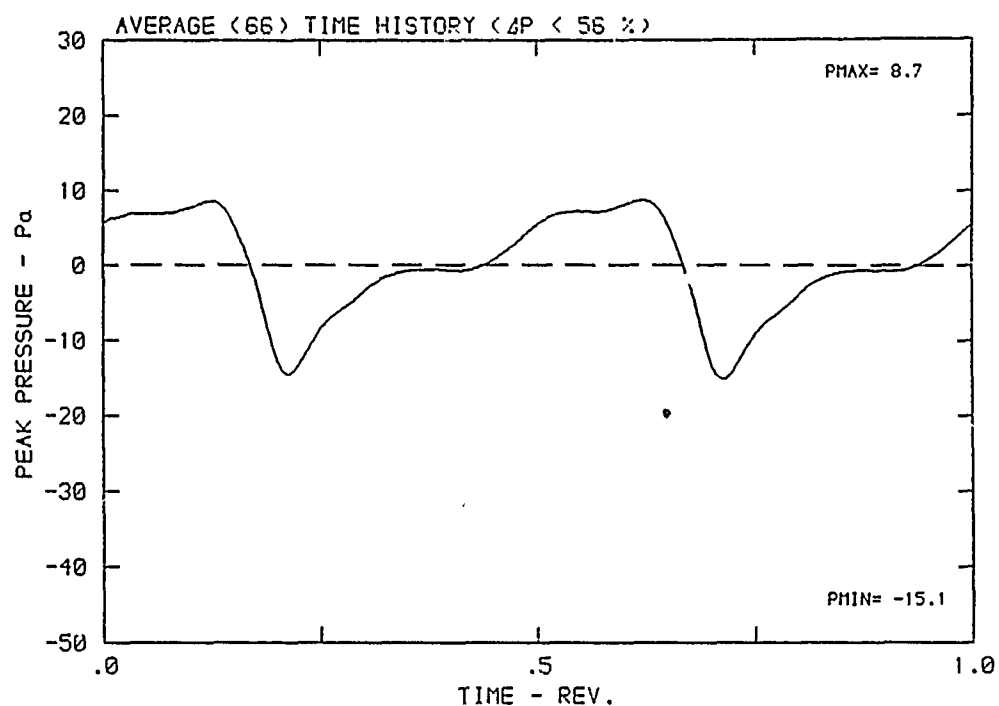
DATA POINT: CN-2 RUN: 103 MP: 2

$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K



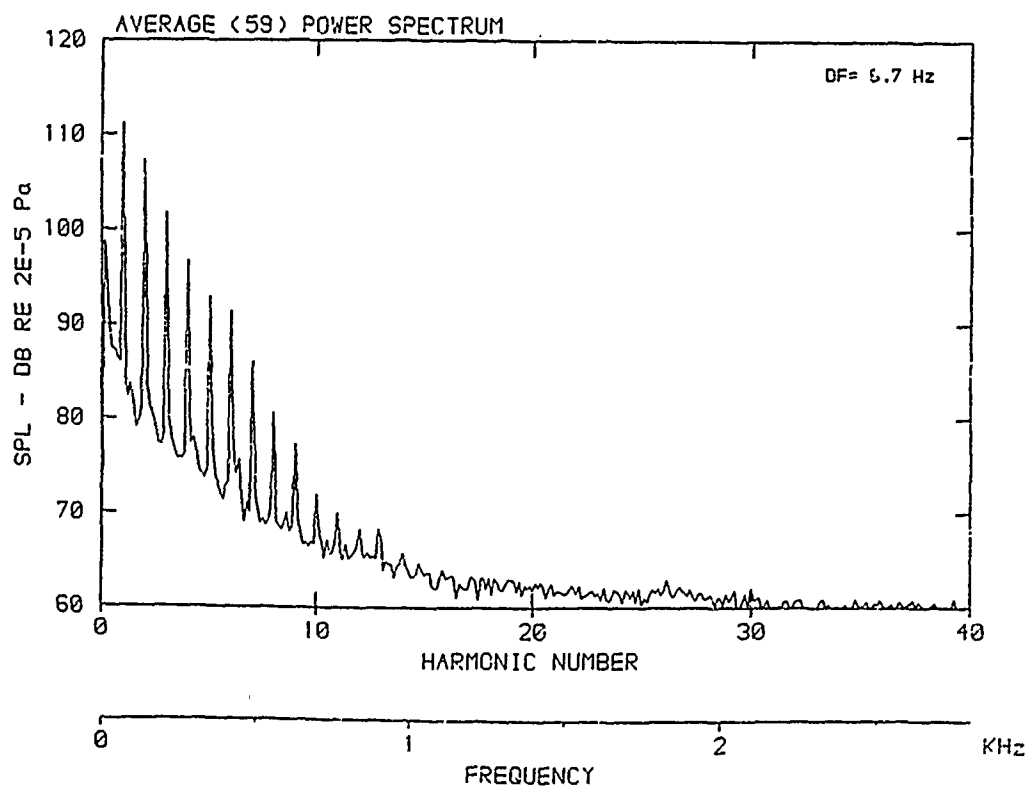
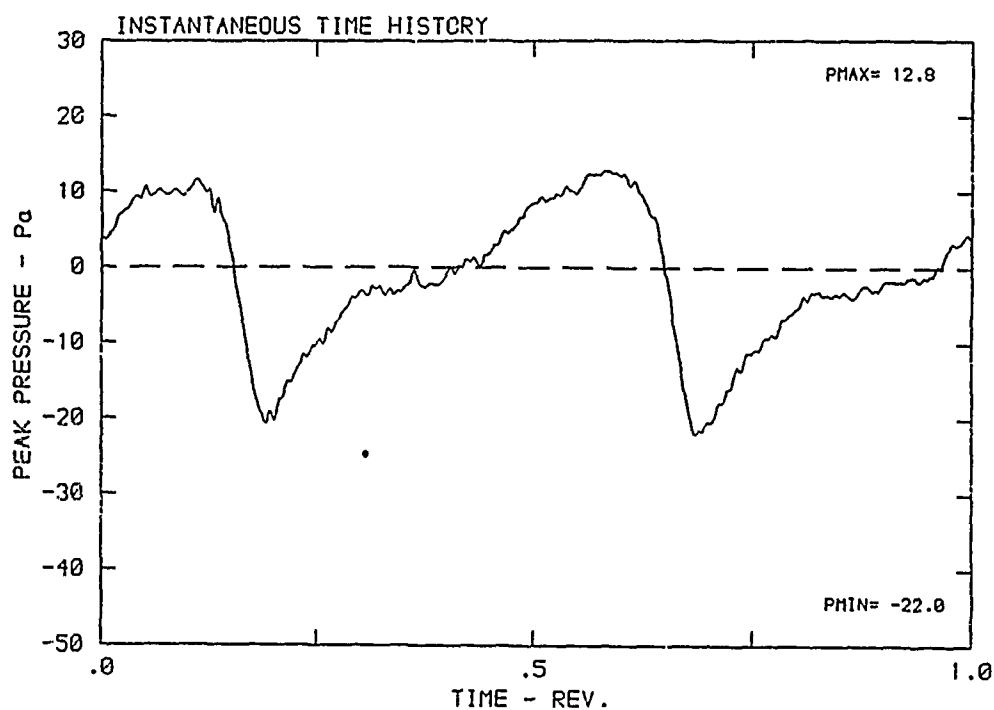
DATA POINT: CN-2    RUN: 103    MP: 2

$\beta$ : 23.7°    MH: .6705    n: 2100 rpm    v/u: .202     $\phi$ : .0°    T: 287.5 K



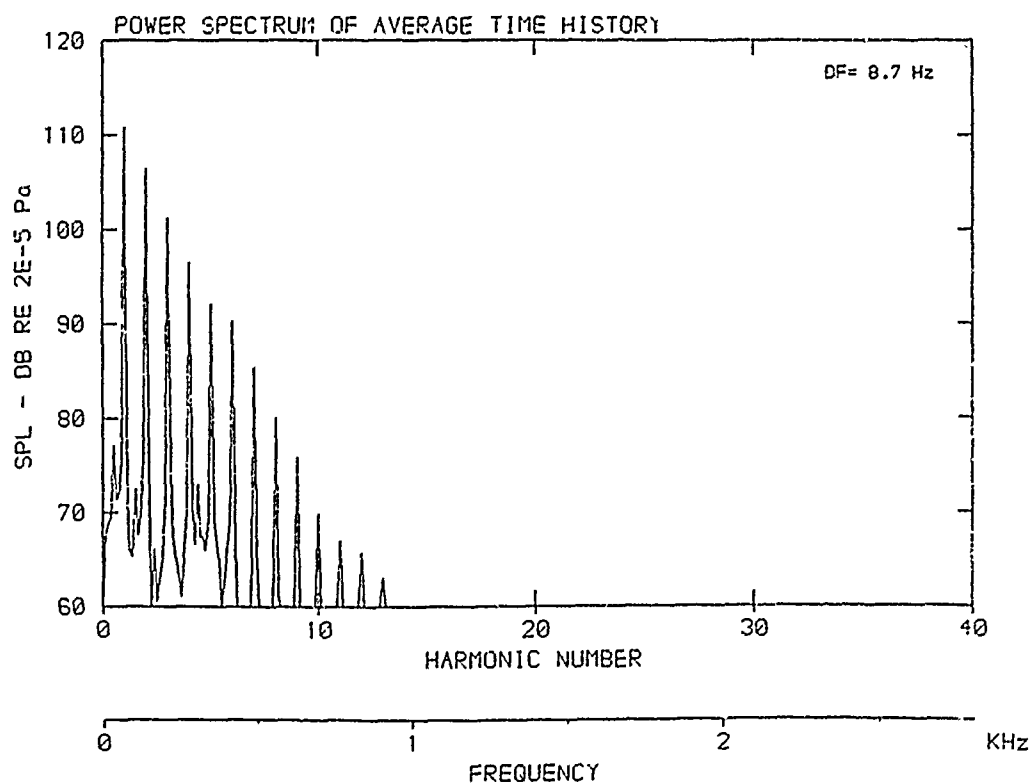
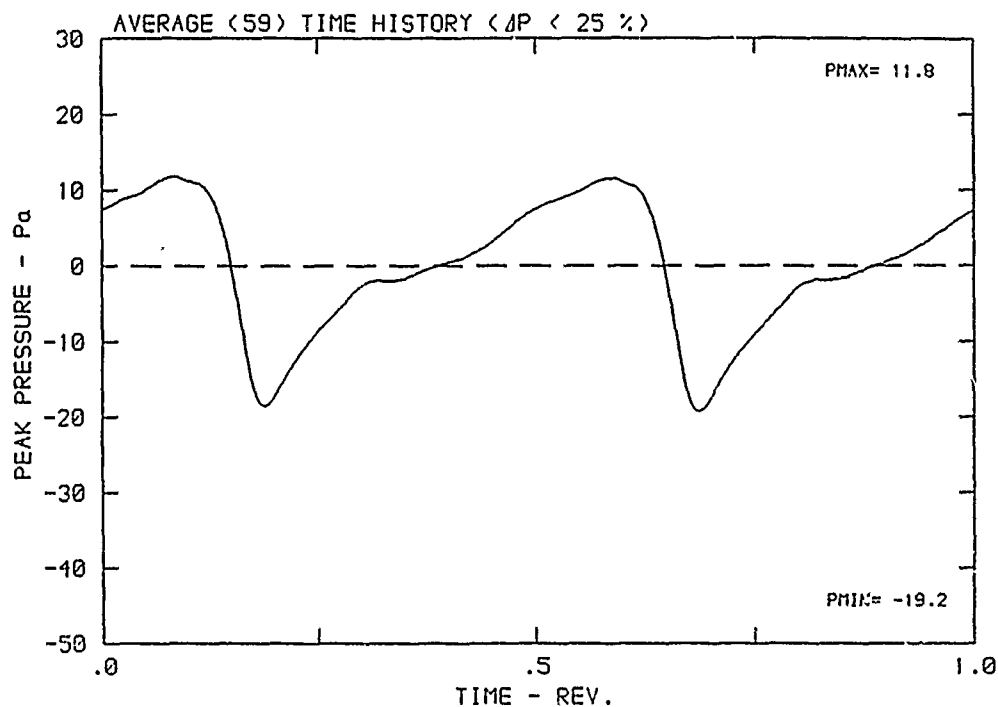
DATA POINT: CN-2 RUN: 103 MP: 3

$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K



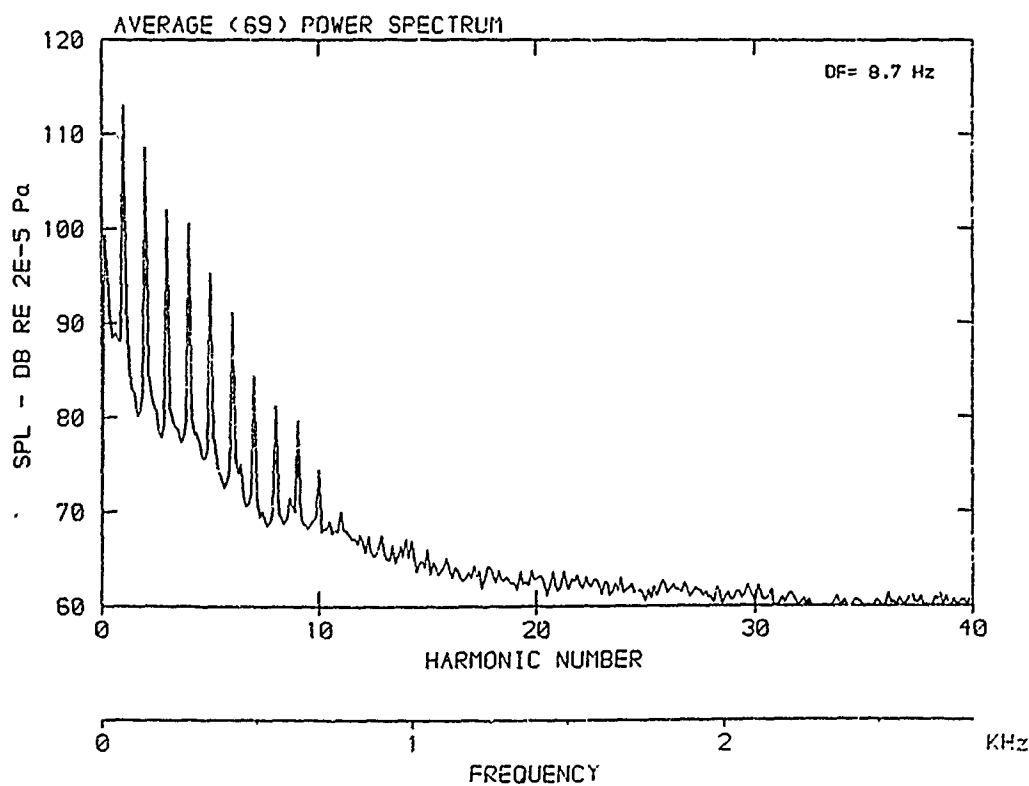
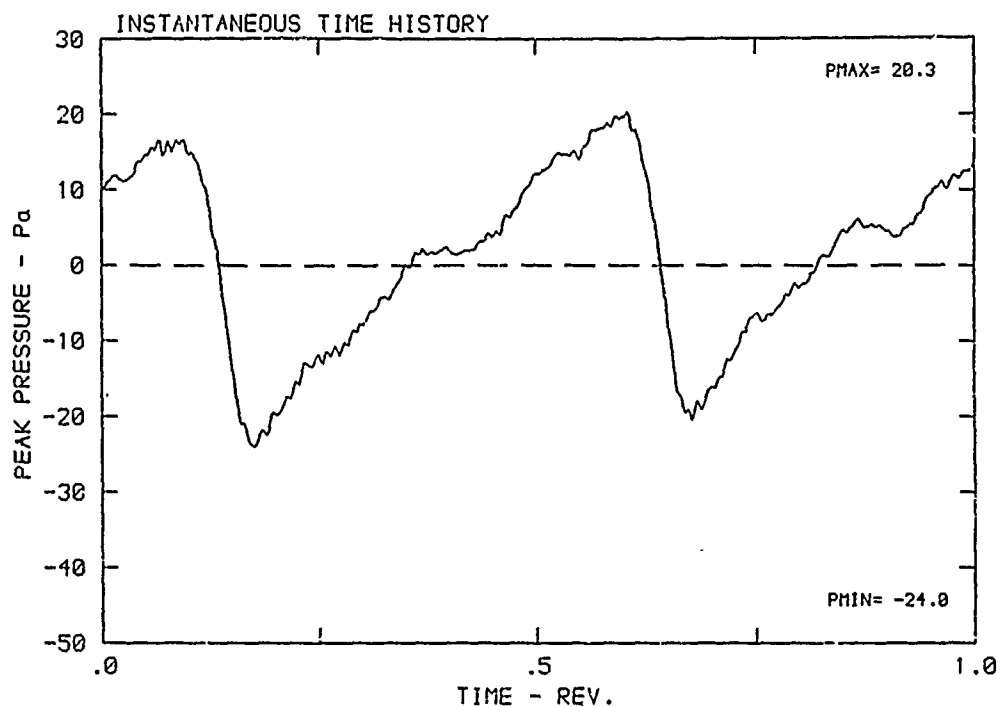
DATA POINT: CN-2 RUN: 103 MP: 3

$\beta$ : 23.7° MH: .6705 n: 2100 rpm  $v/u$ : .202  $\phi$ : .0° T: 287.5 K



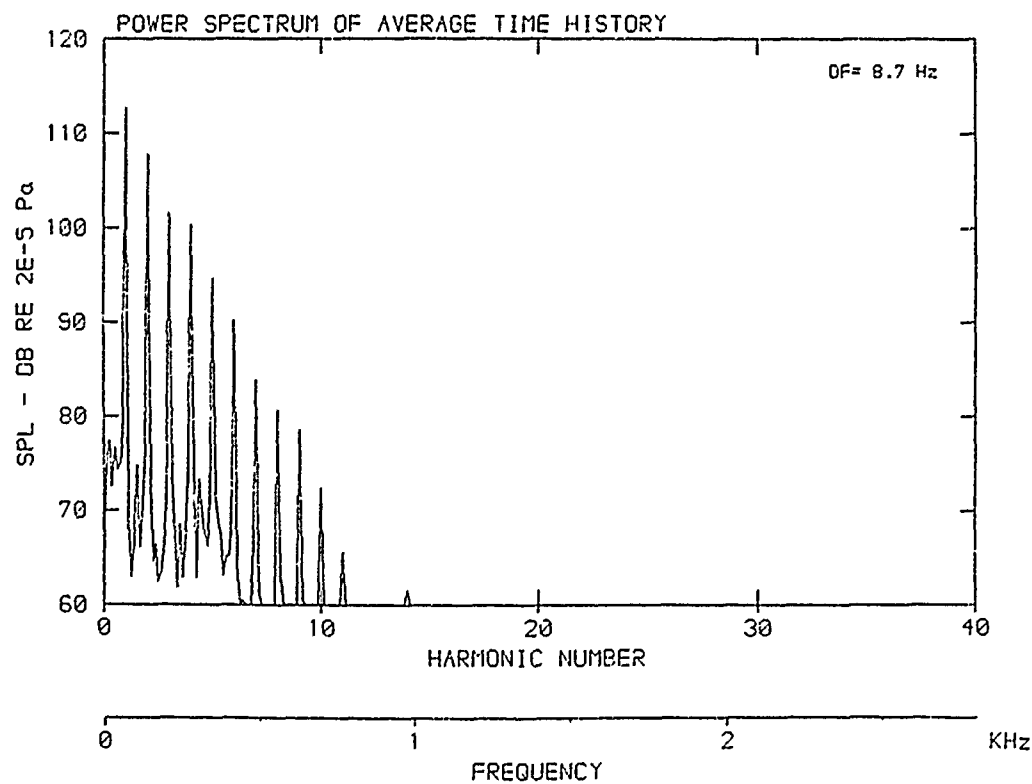
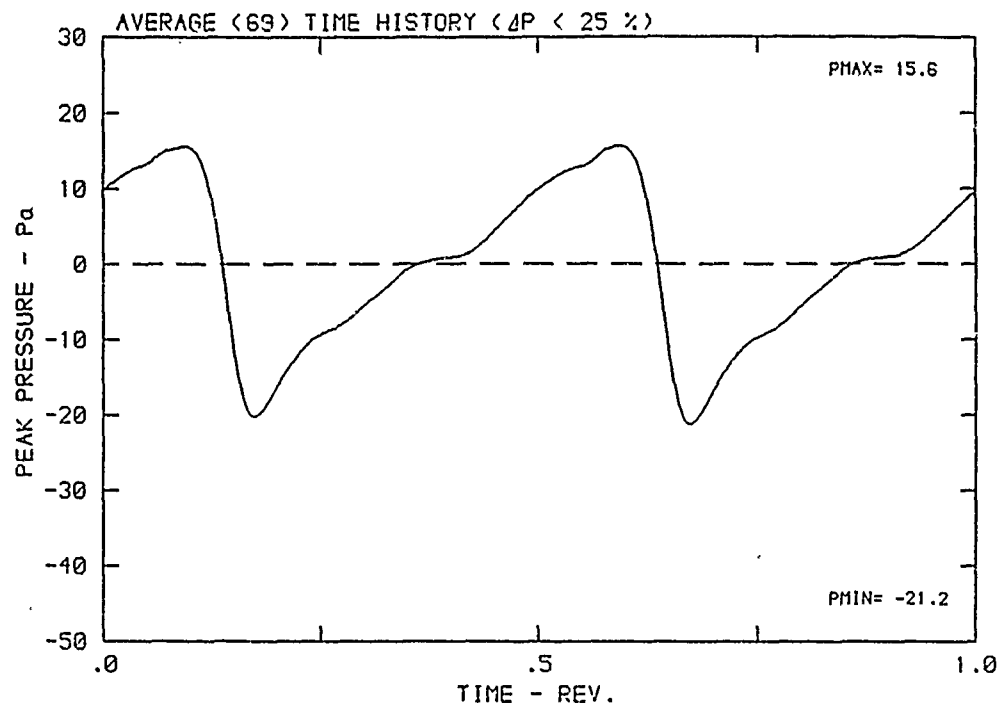
DATA POINT: CN-2 RUN: 103 MP: 4

$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K



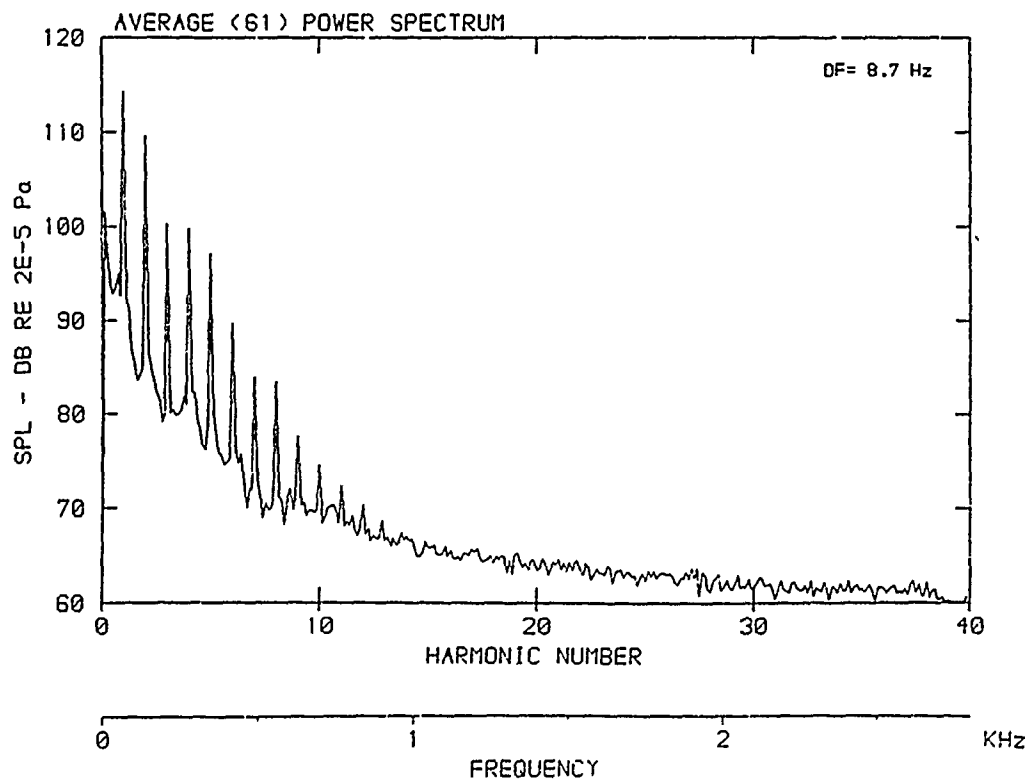
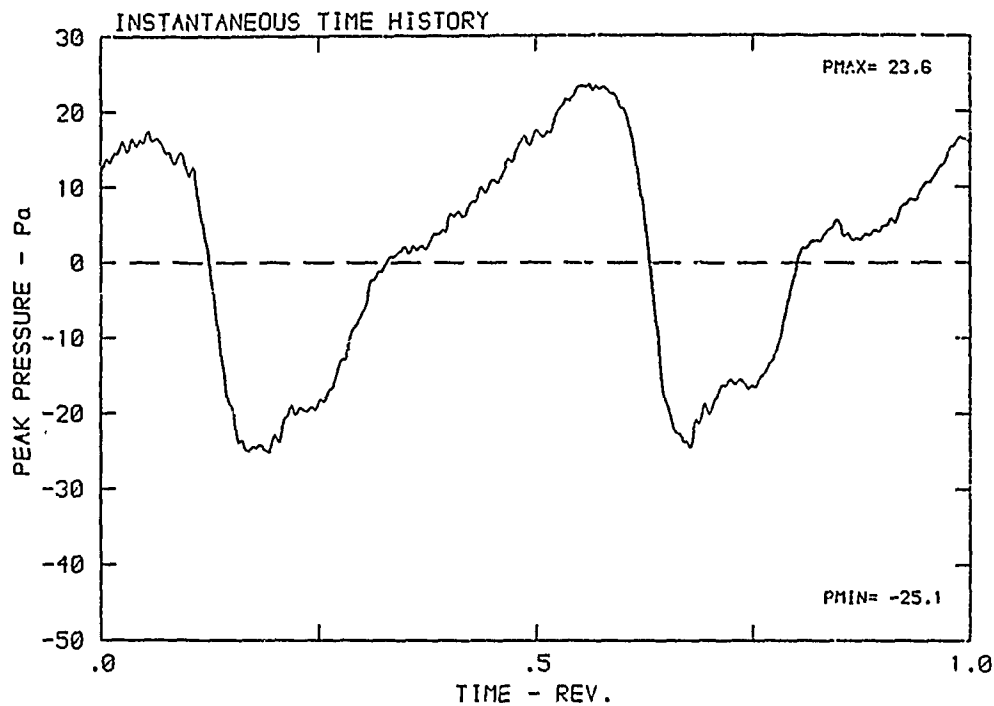
DATA POINT: CN-2 RUN: 103 MP: 4

$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K



DATA POINT: CN-2 RUN: 103 MP: 5

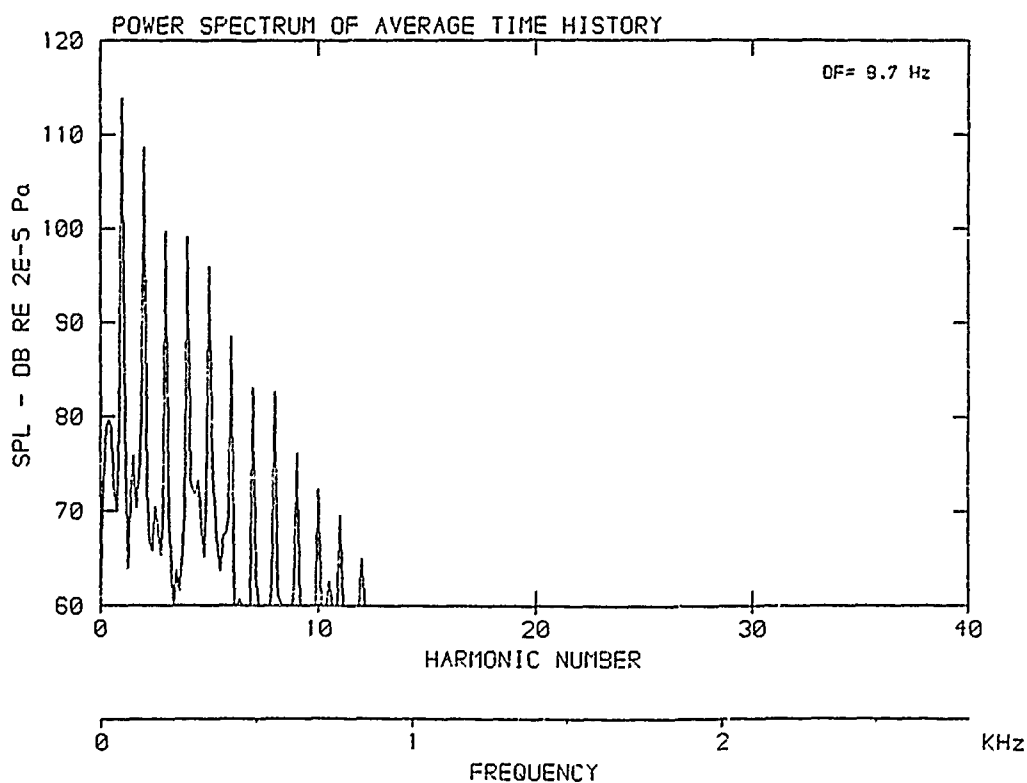
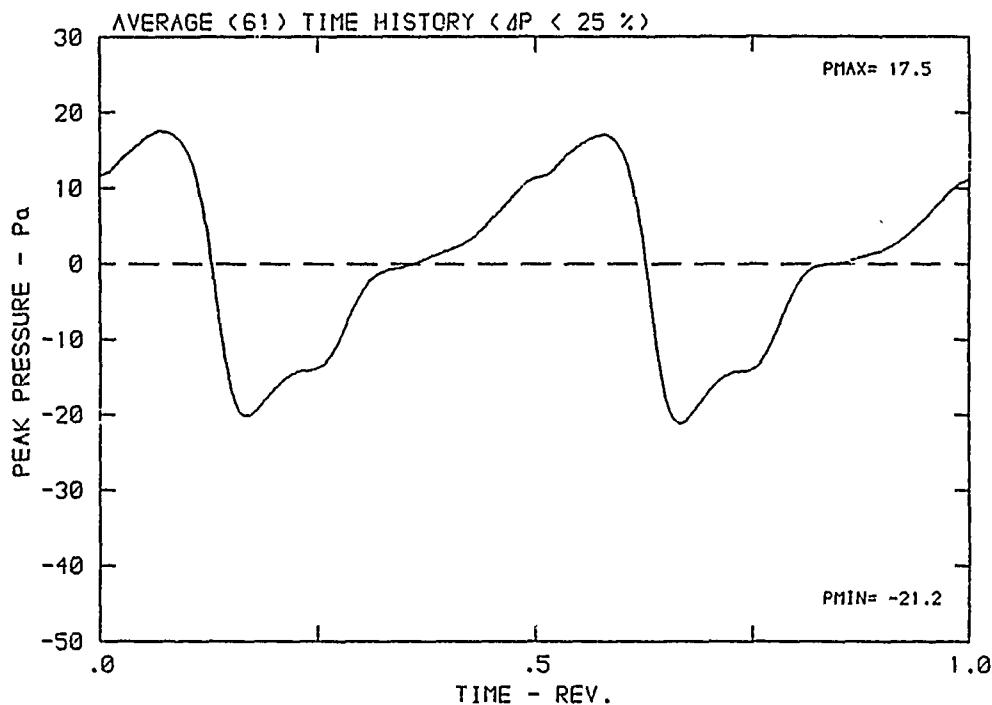
$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K





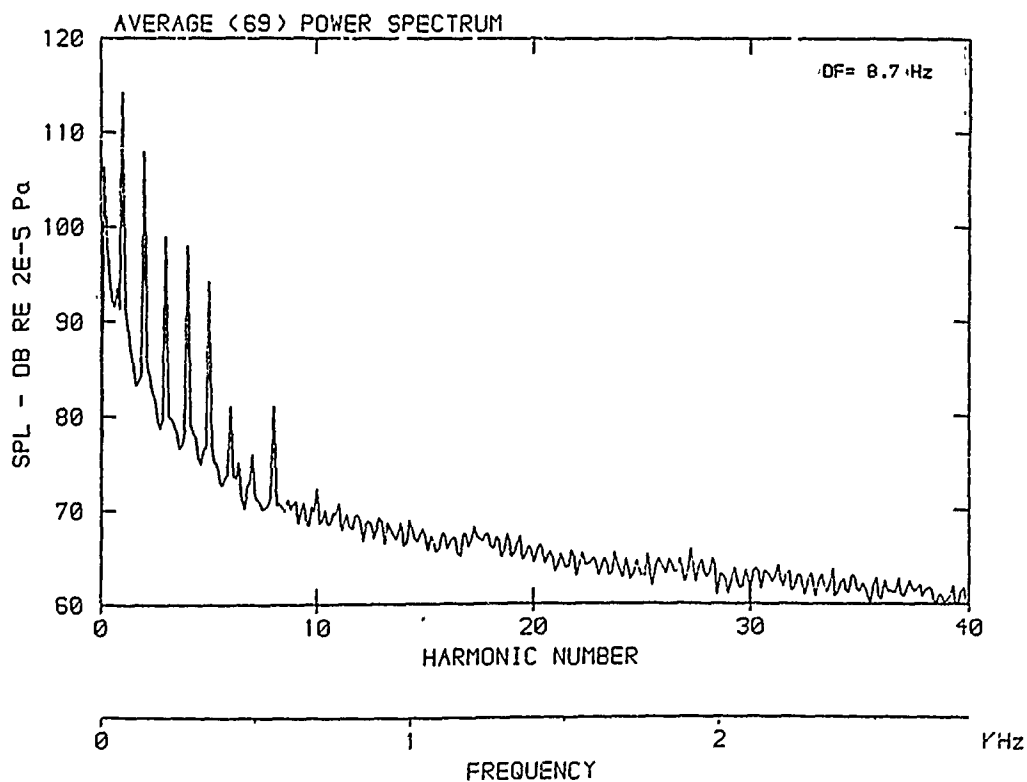
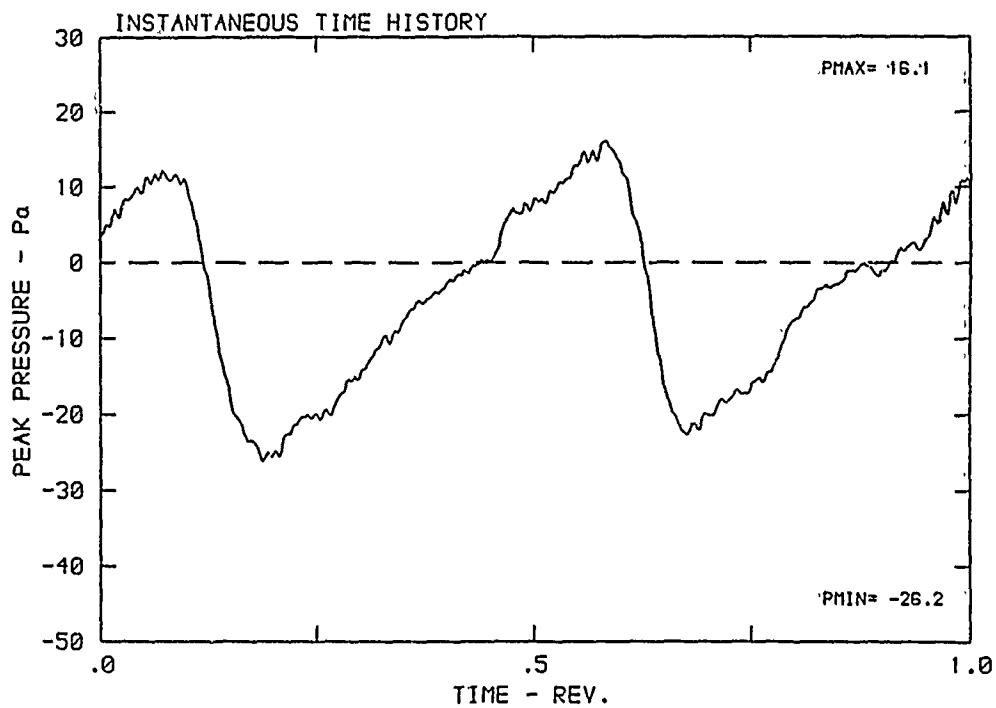
DATA POINT: CN-2 RUN: 103 MP: 5

$\beta$ : 23.7° MH: .6705 n: 2100 rpm  $v/u$ : .202  $\phi$ : .0° T: 287.5 K



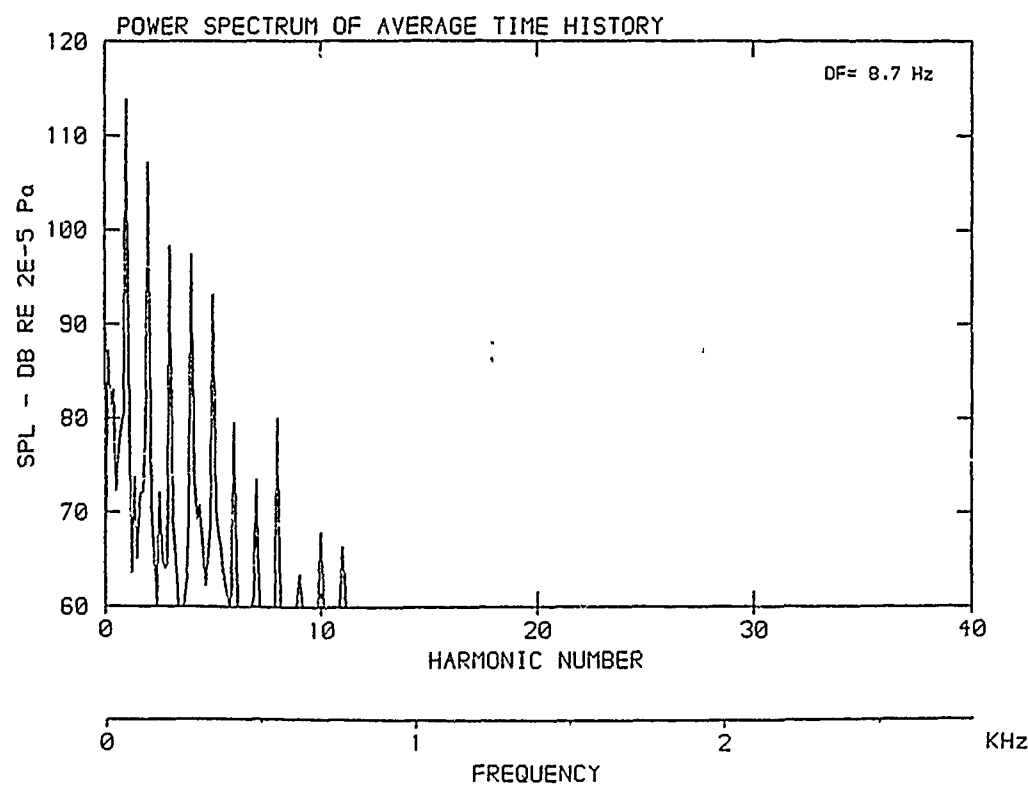
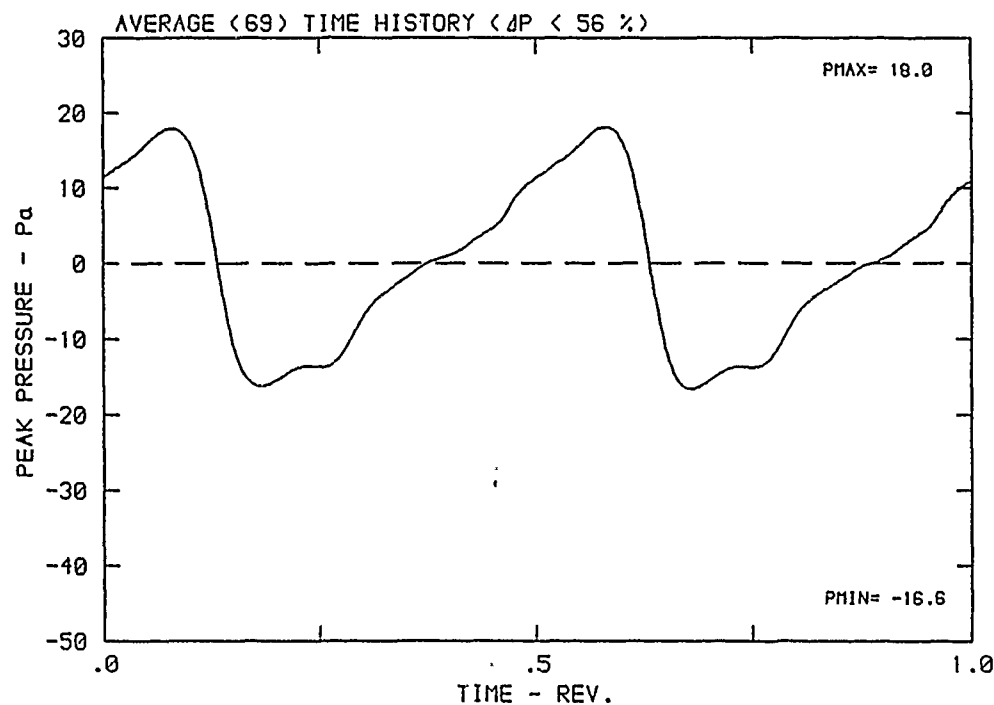
DATA POINT: CN-2 RUN: 103 MP: 6

$\beta$ : 23.7° MH: .6705 n: 2100 rpm  $v/u$ : .202  $\phi$ : .0° T: 287.5 K



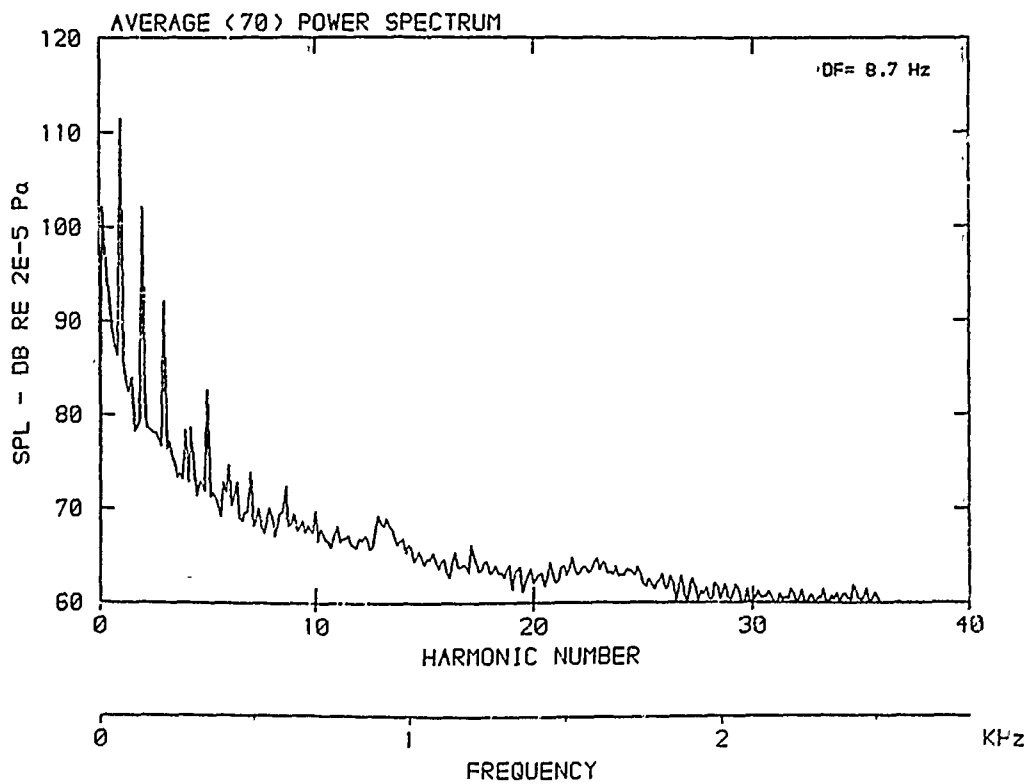
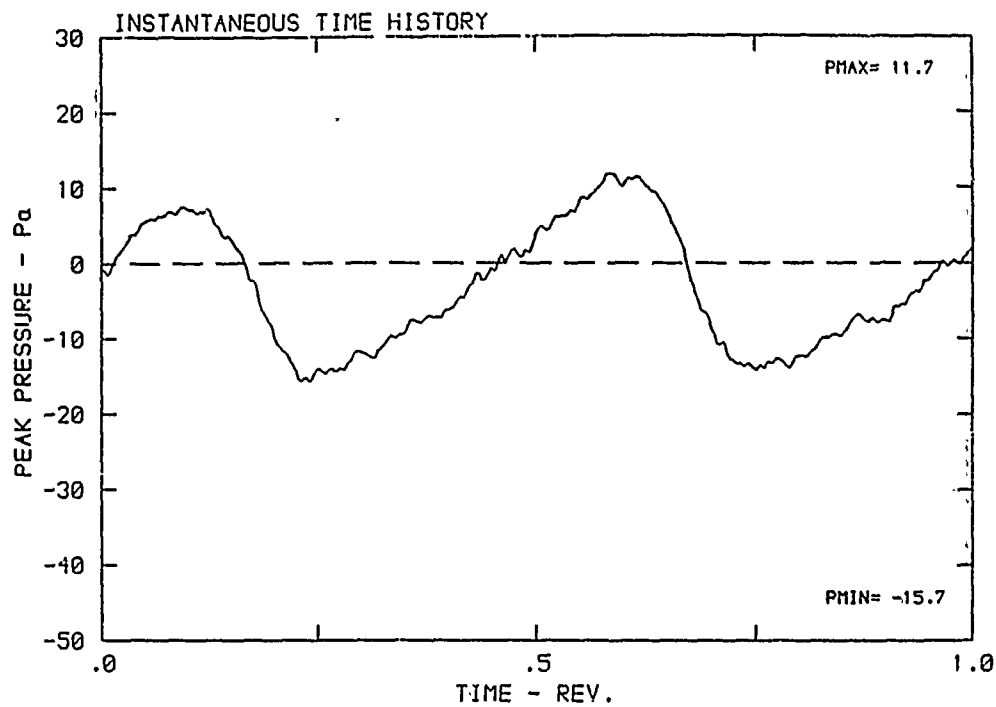
DATA POINT: CN-2 RUN: 103 MP: 6

$\beta$ : 23.7° MH: .6705 n: 2100 rpm  $v/u$ : .202  $\phi$ : .0° T: 287.5 K



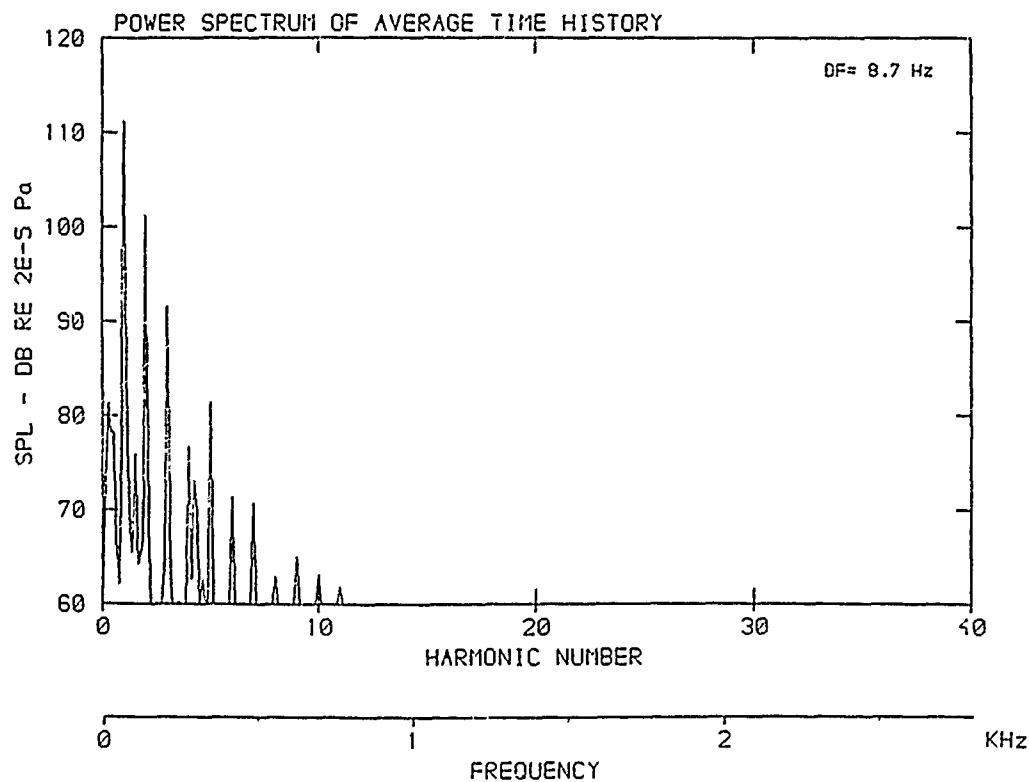
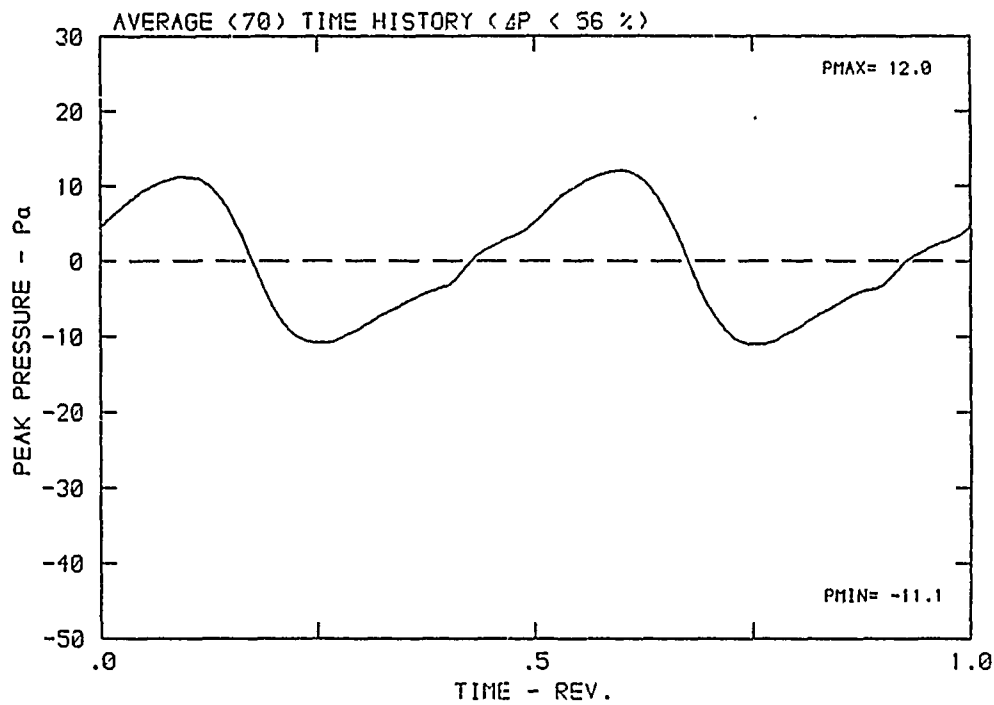
DATA POINT: CN-2 RUN: 103 MP: 7

$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K



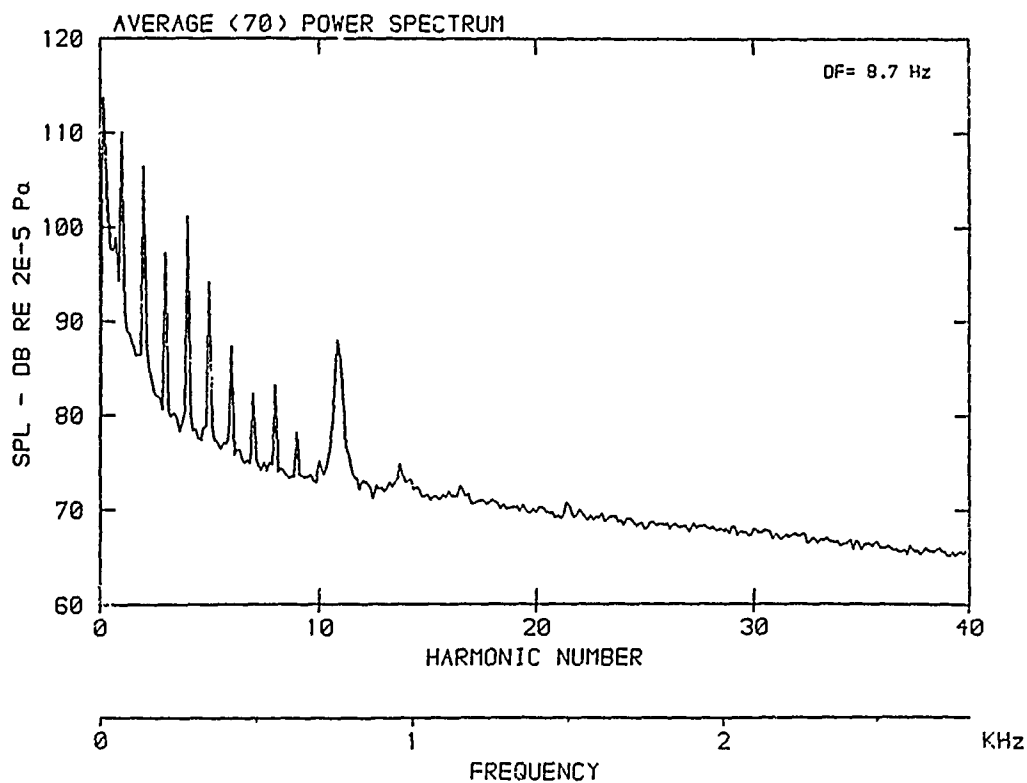
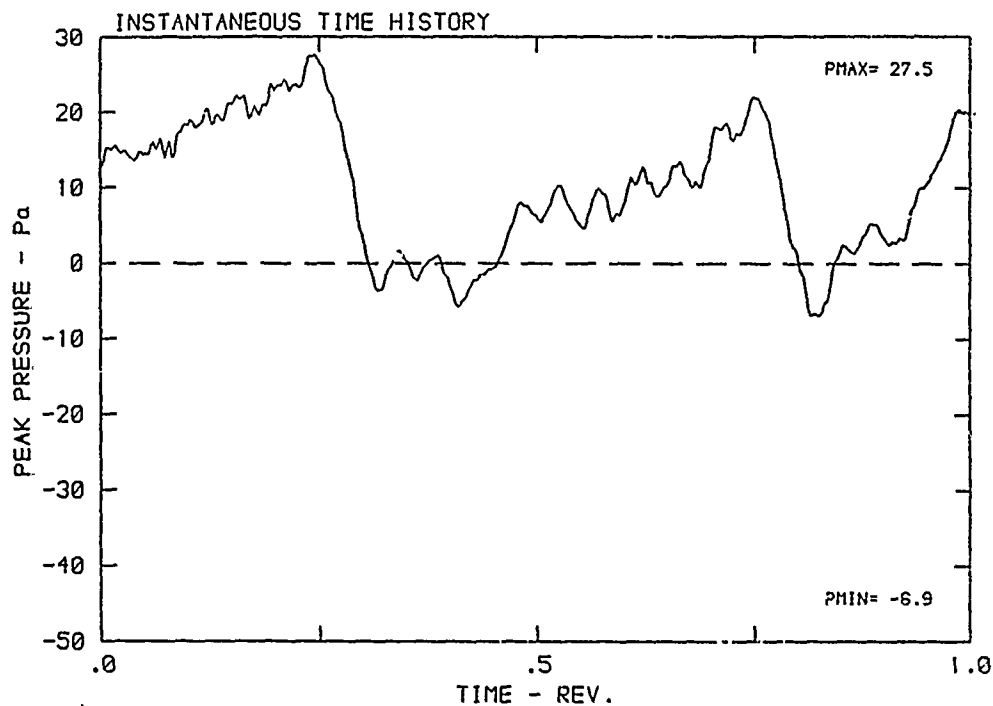
DATA POINT: CN-2    RUN: 103    MP: 7

$\beta$ : 23.7°    MH: .6705    n: 2100 rpm     $v/u$ : .202     $\phi$ : .0°    T: 287.5 K



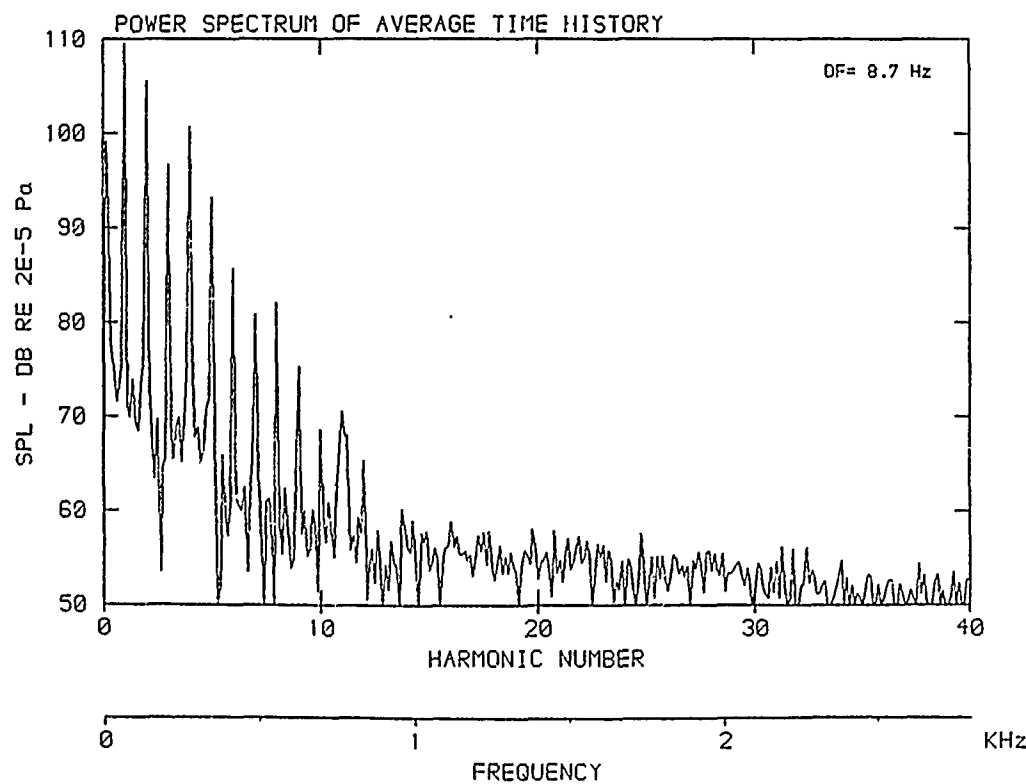
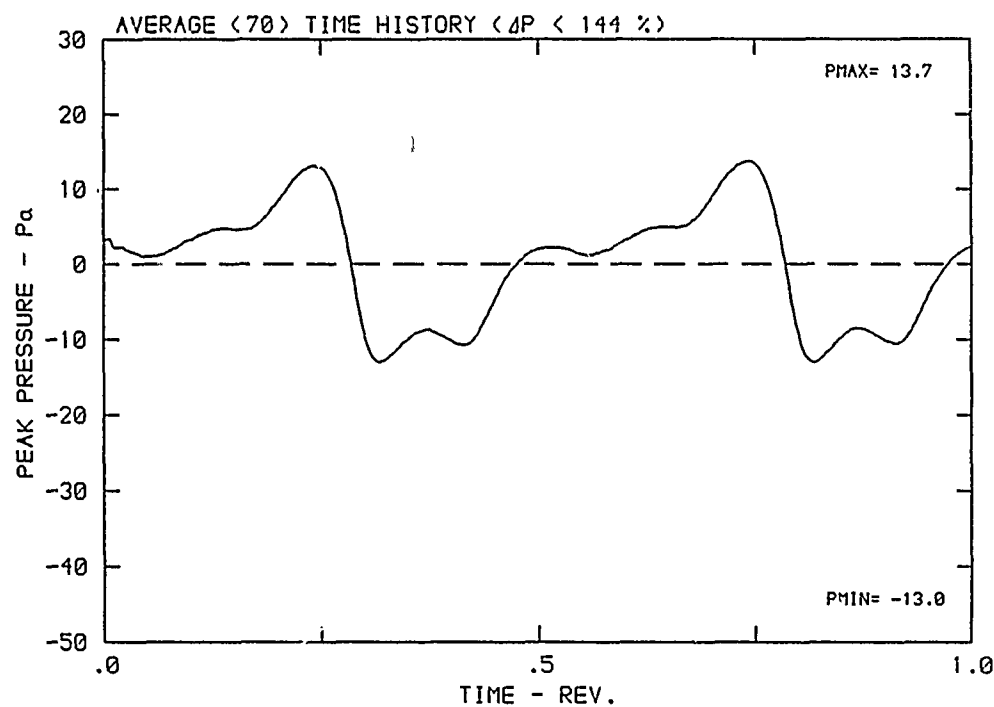
DATA POINT: CN-2    RUN: 103    MP: 9

$\beta$ : 23.7°    NH: .6705    n: 2100 rpm    v/u: .202     $\phi$ : .0°    T: 287.5 K



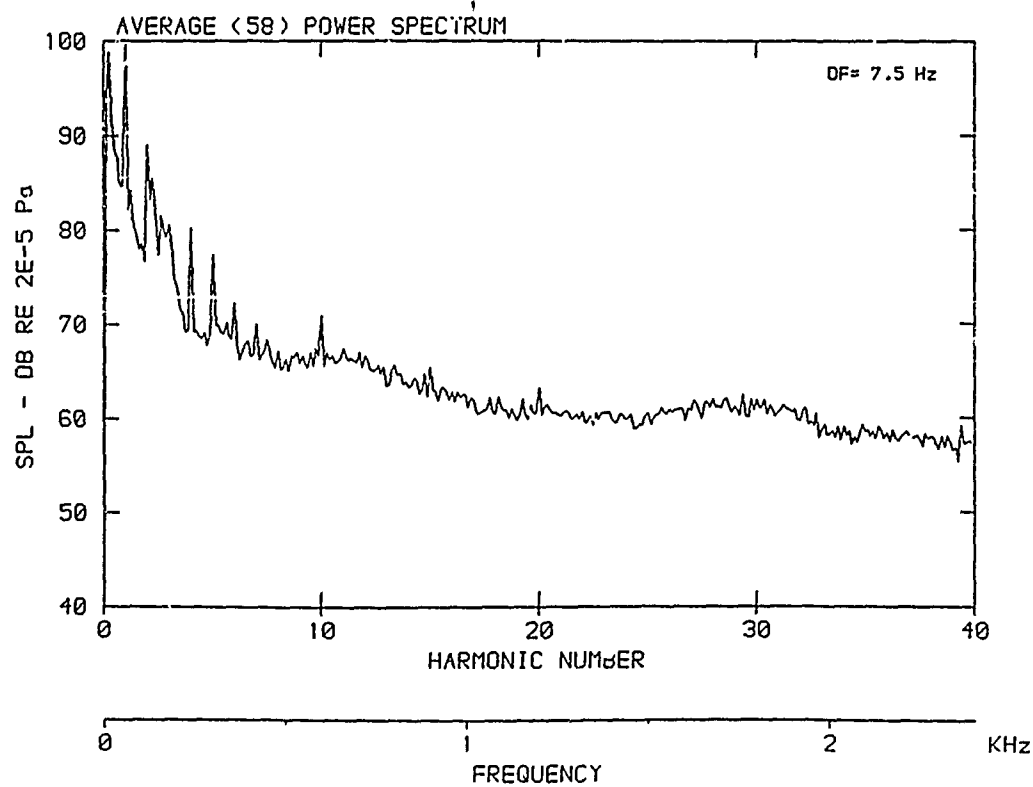
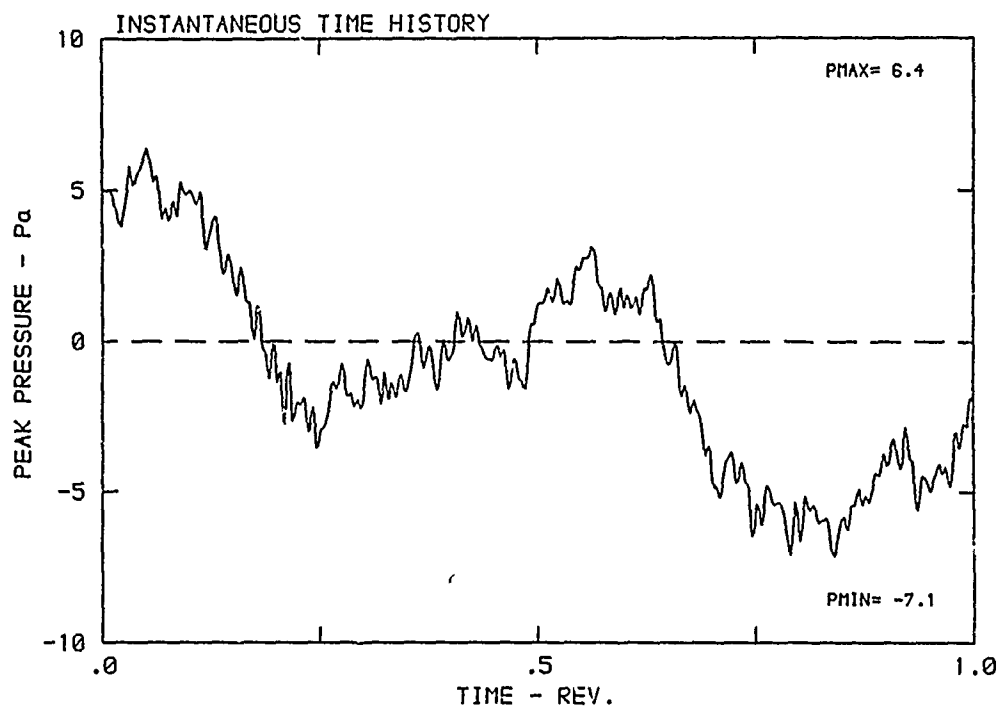
DATA POINT: CN-2 RUN: 103 MP: 9

$\beta$ : 23.7° MH: .6705 n: 2100 rpm v/u: .202  $\phi$ : .0° T: 287.5 K



DATA POINT: CN-3 RUN: 101 MP: 1

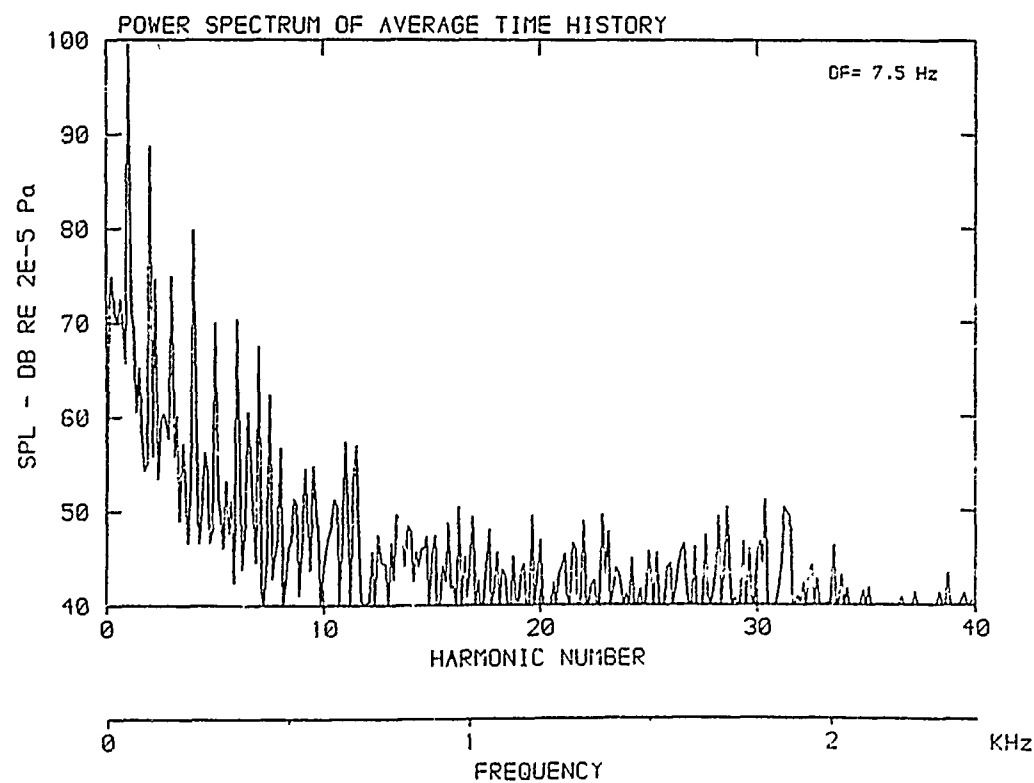
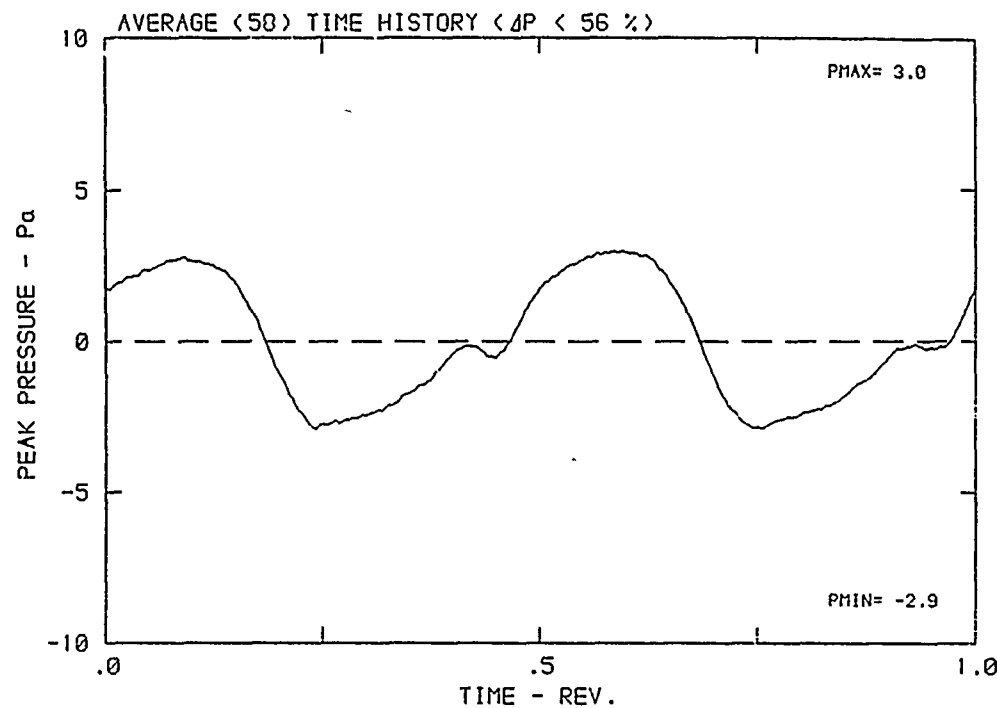
$\beta$ : 23.7° MH: .5838 n: 1800 rpm v/u: .269  $\phi$ : .0° T: 287.1 K





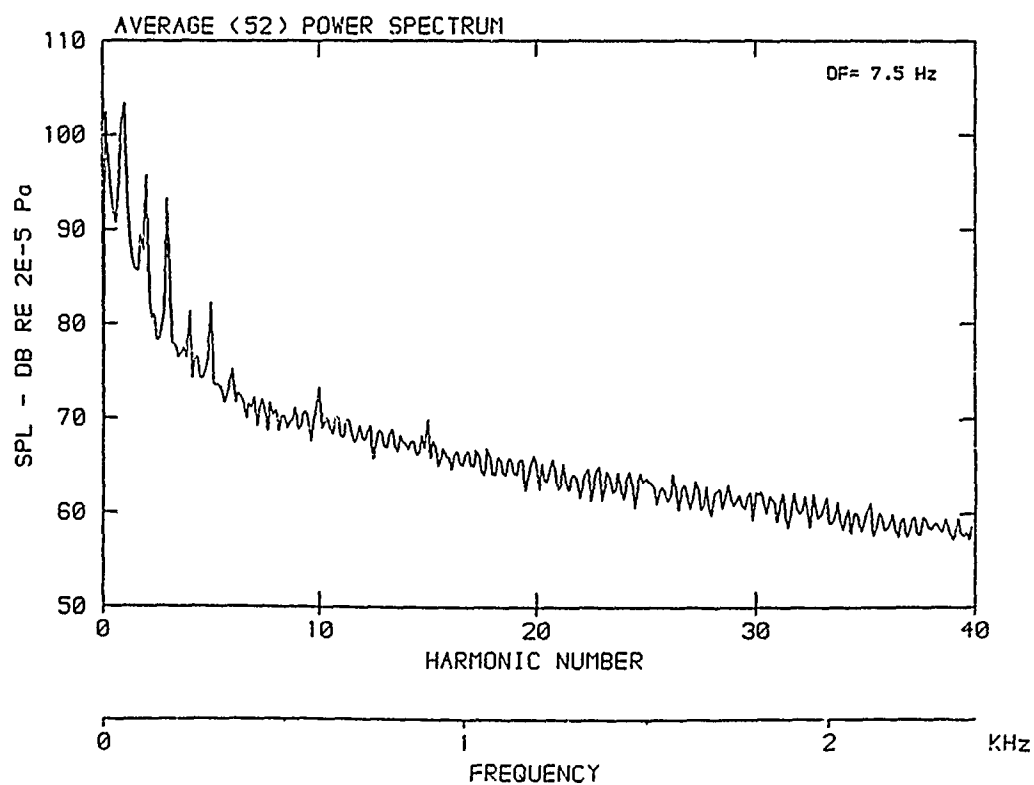
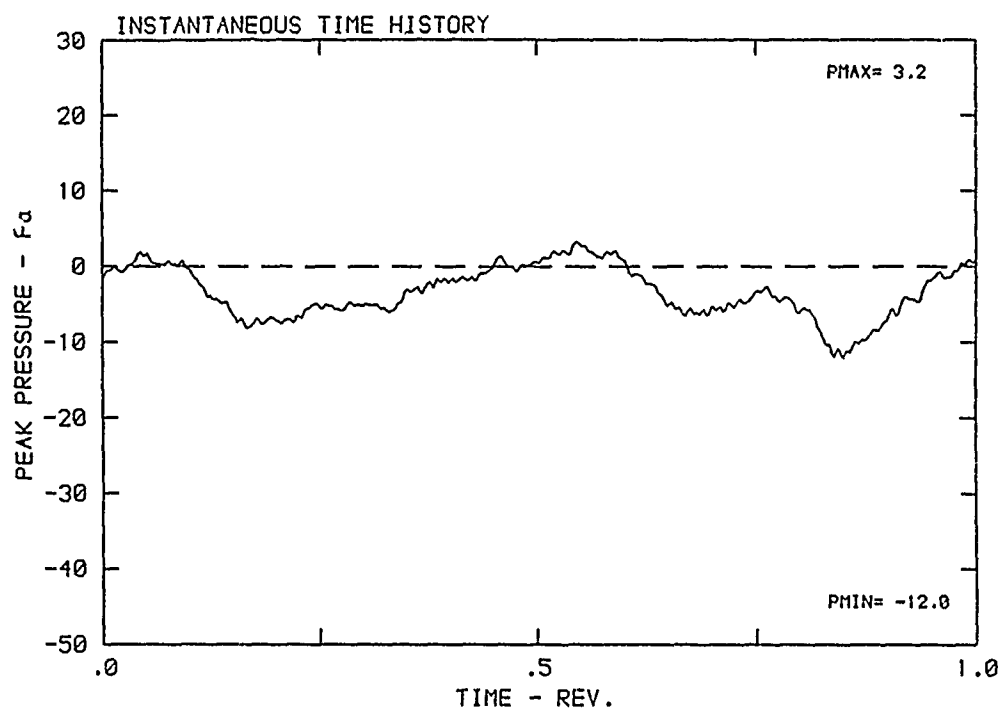
DATA POINT: CN-3    RUN: 101    MP: 1

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



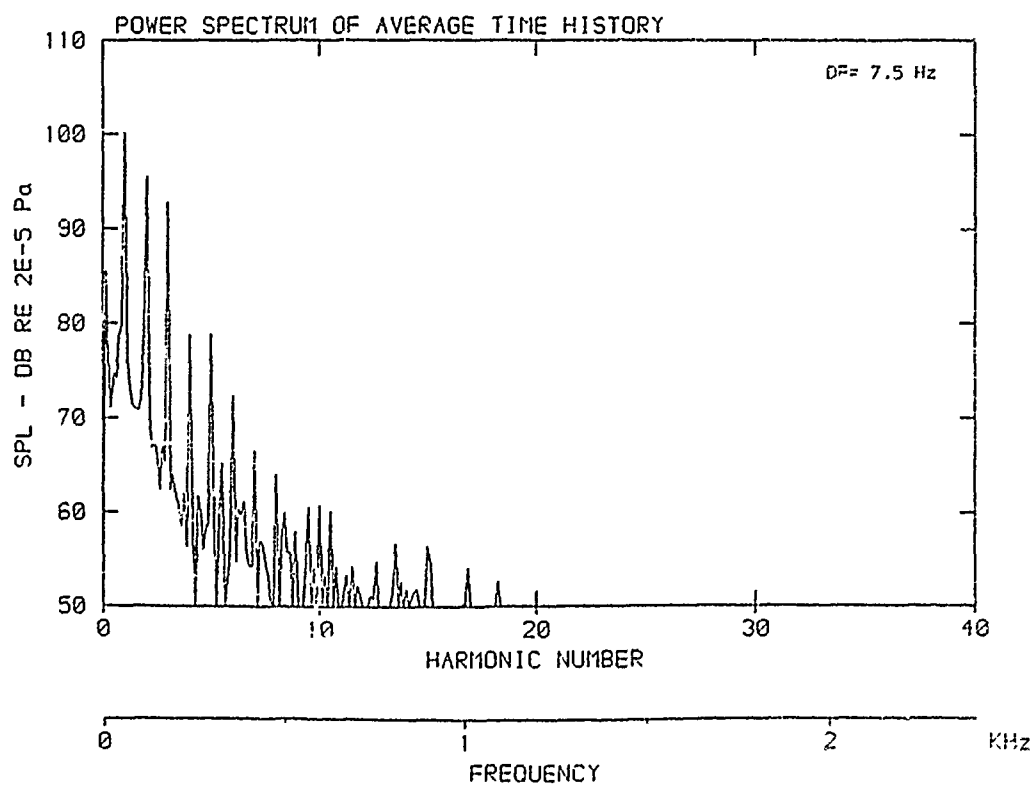
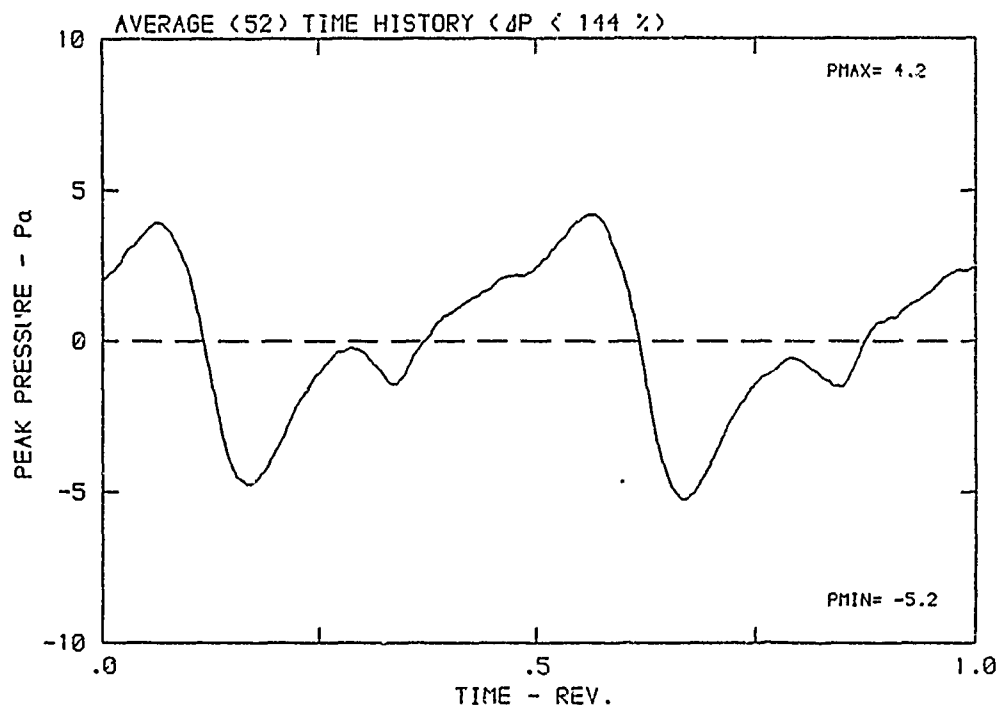
DATA POINT: CN-3 RUN: 101 MP: 2

$\beta$ : 23.7° MH: .5838 n: 1800 rpm v/u: .269  $\phi$ : .0° T: 287.1 K



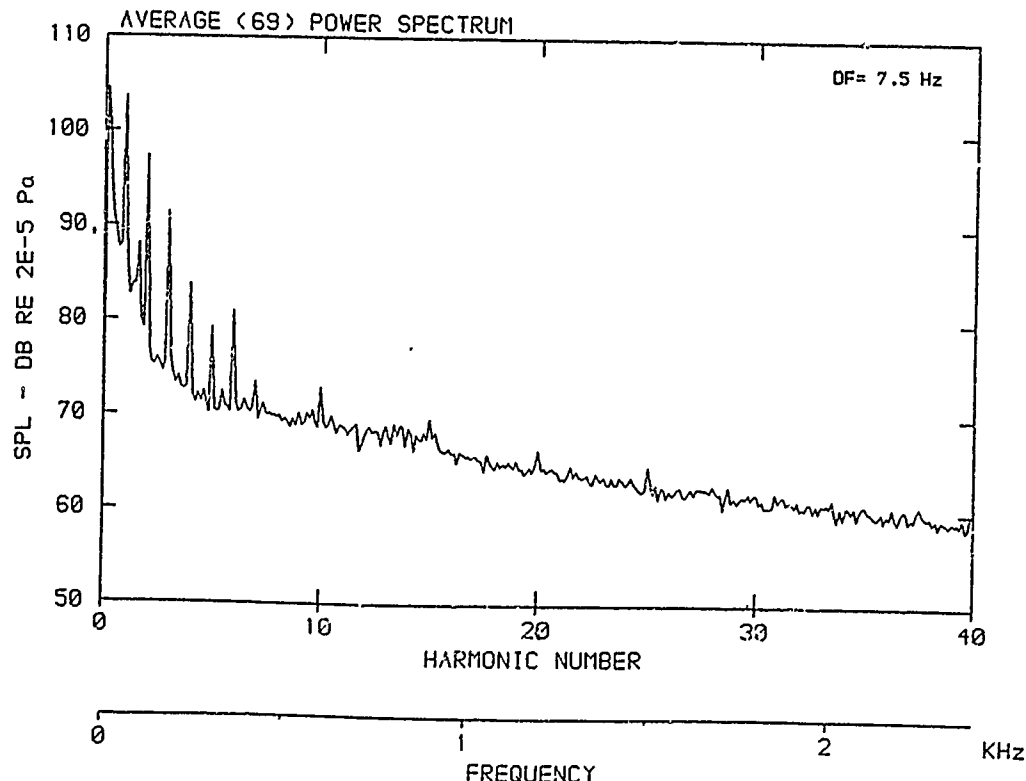
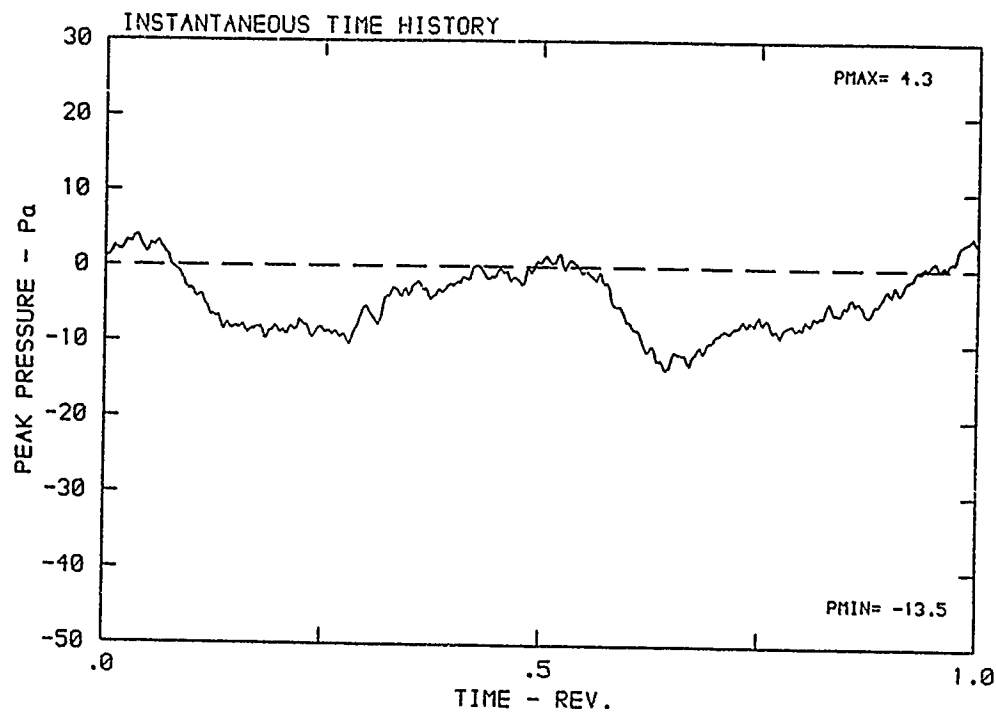
DATA POINT: CN-3 RUN: 101 MP: 2

$\beta$ : 23.7° MH: .5838 n: 1800 rpm  $v/u$ : .269  $\phi$ : .0° T: 287.1 K



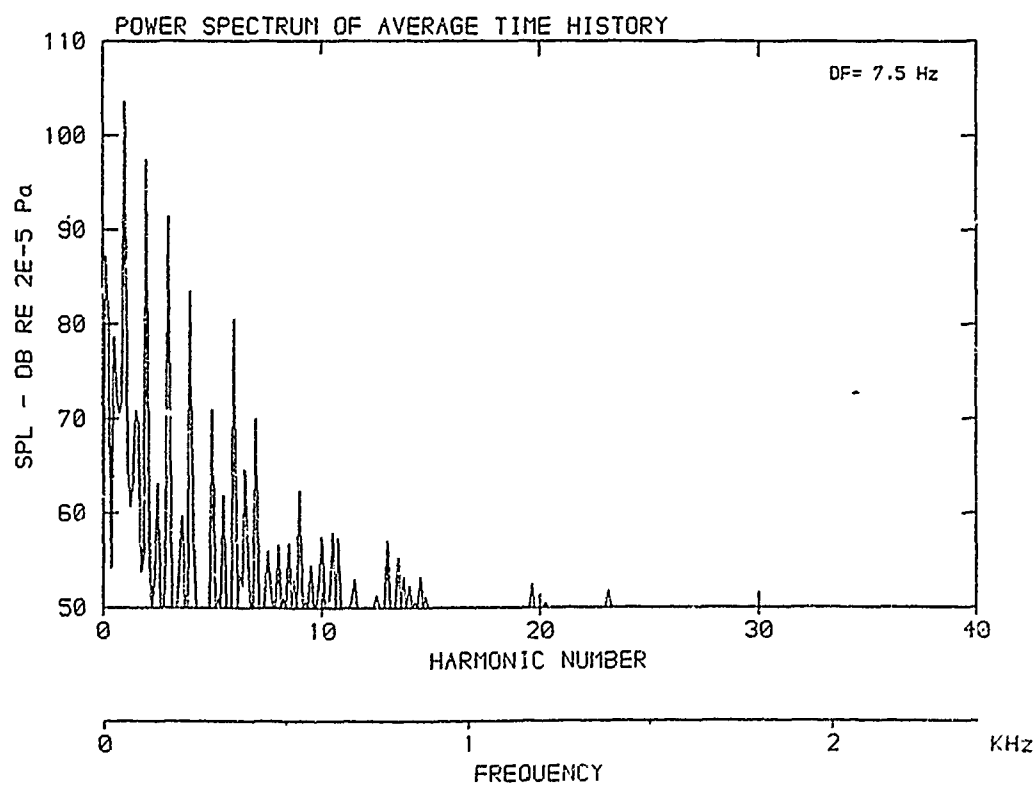
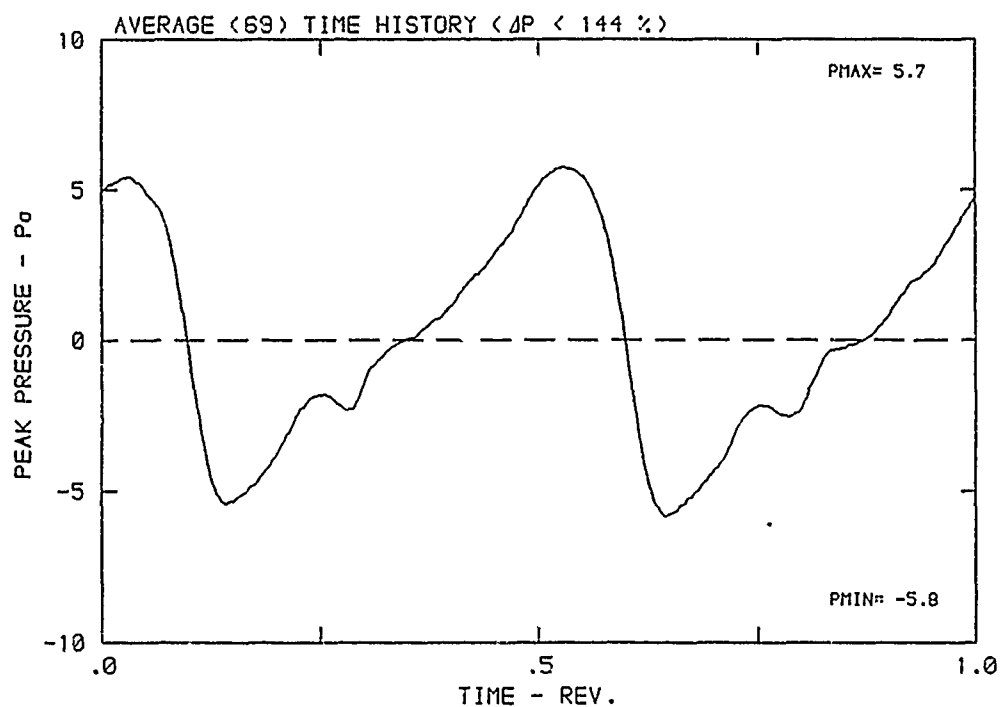
DATA POINT: CN-3    RUN: 101    MP: 3

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



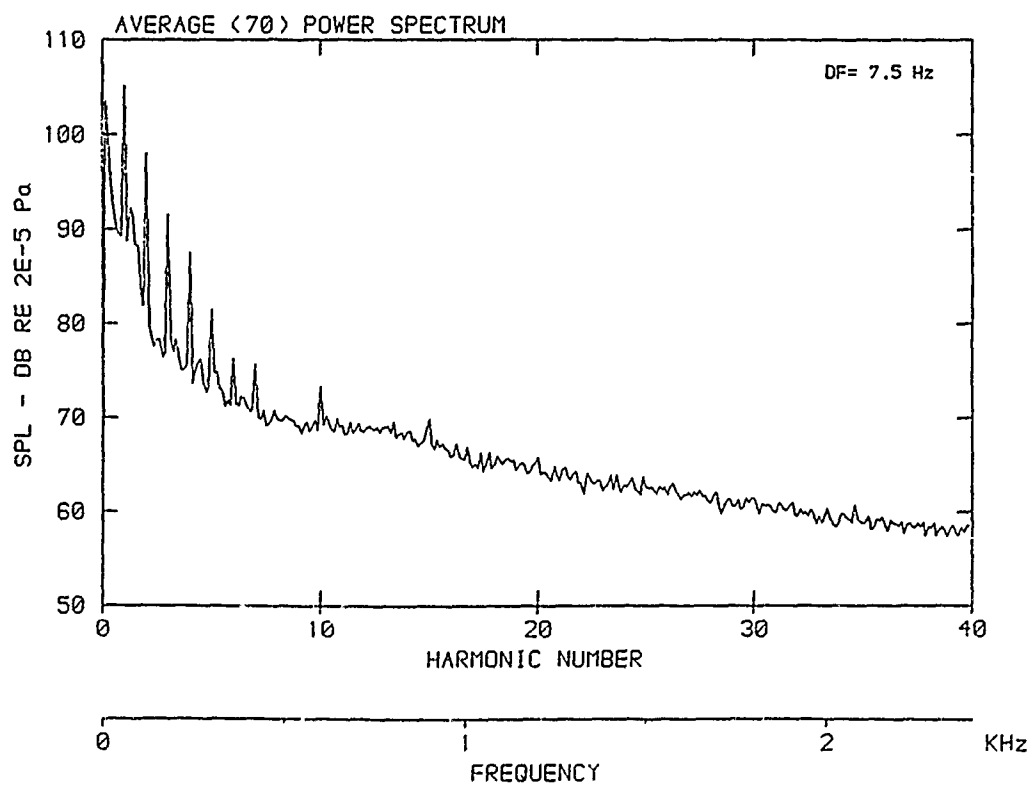
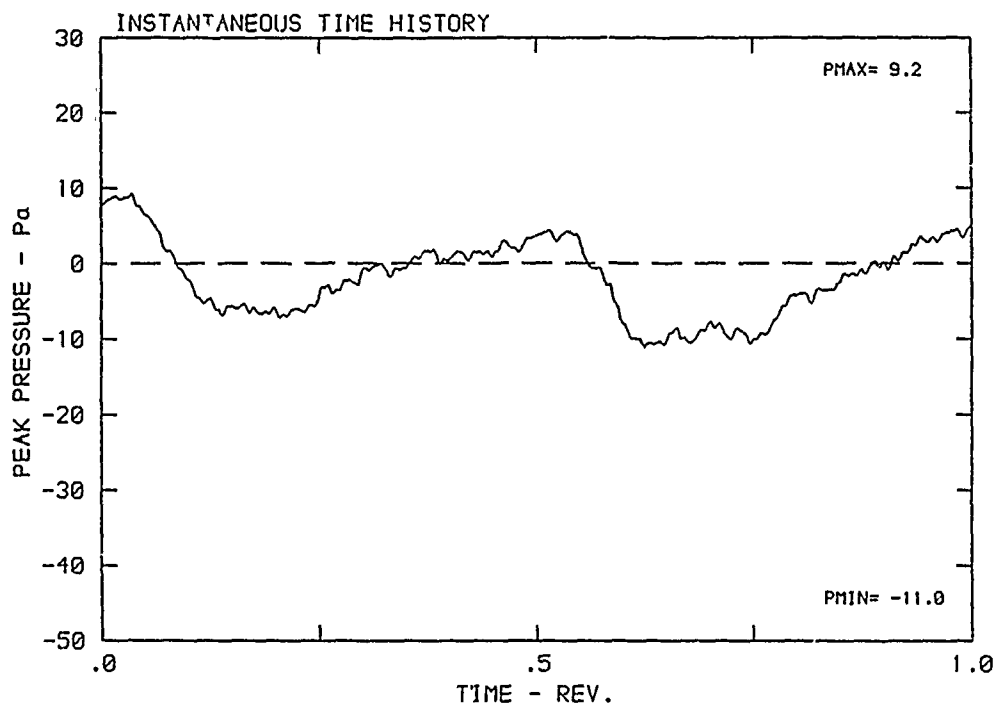
DATA POINT: CN-3    RUN: 101    MP: 3

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



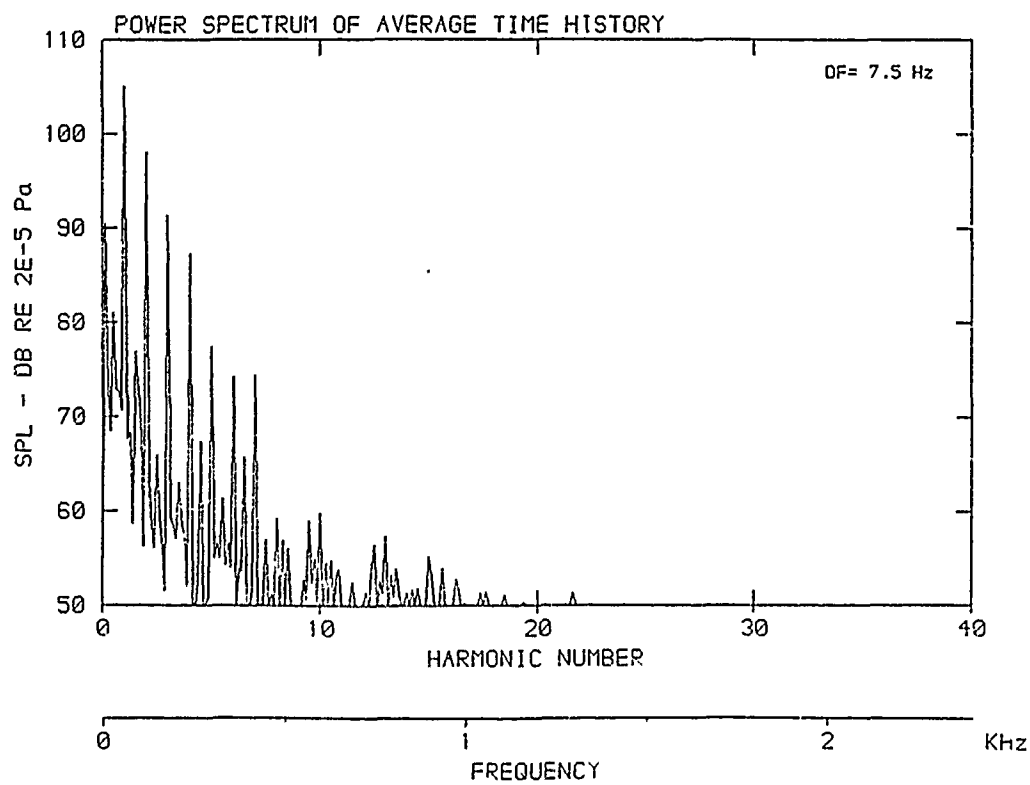
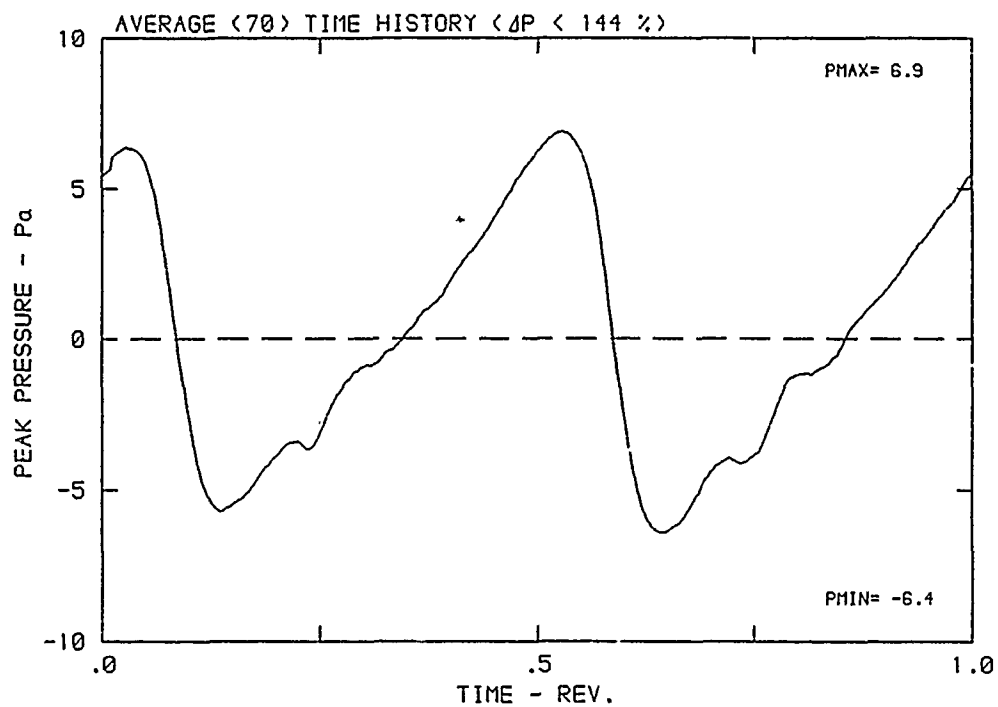
DATA POINT: CN-3    RUN: 101    MP: 4

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



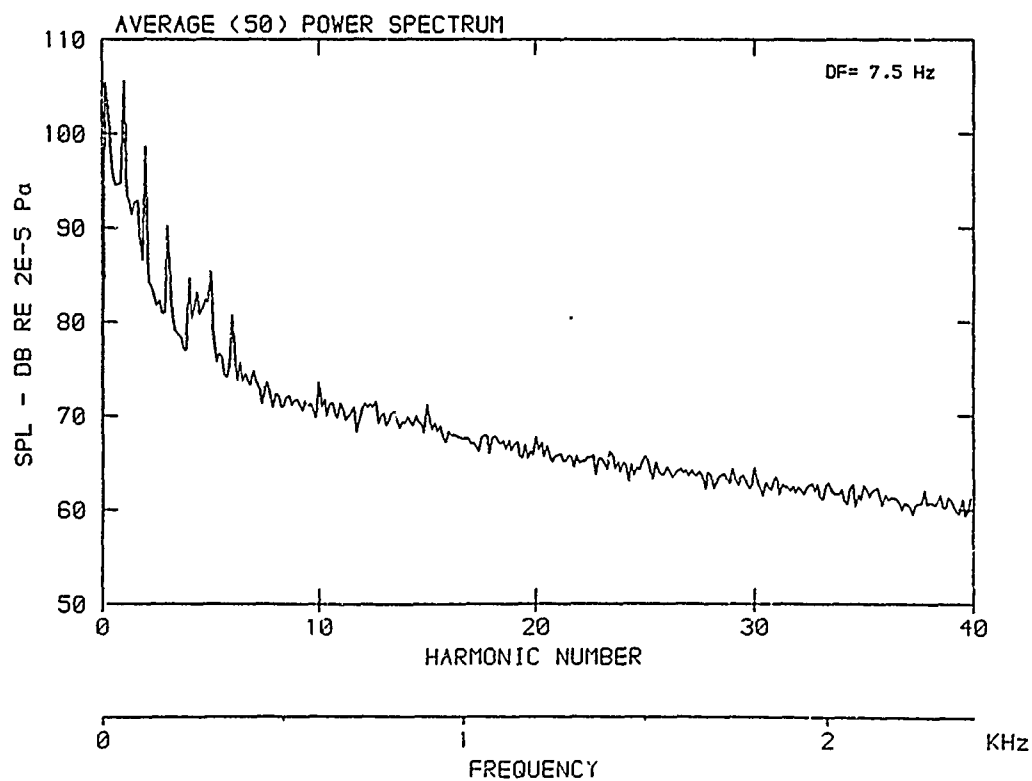
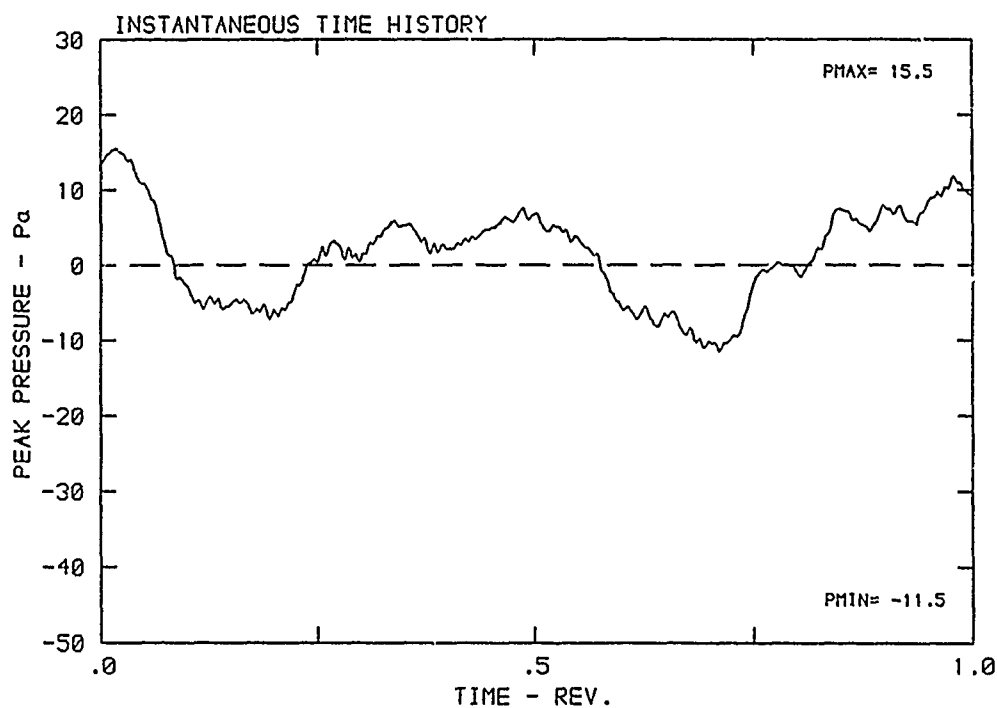
DATA POINT: CN-3    RUN: 101    MP: 4

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



DATA POINT: CN-3 RUN: 101 MP: 5

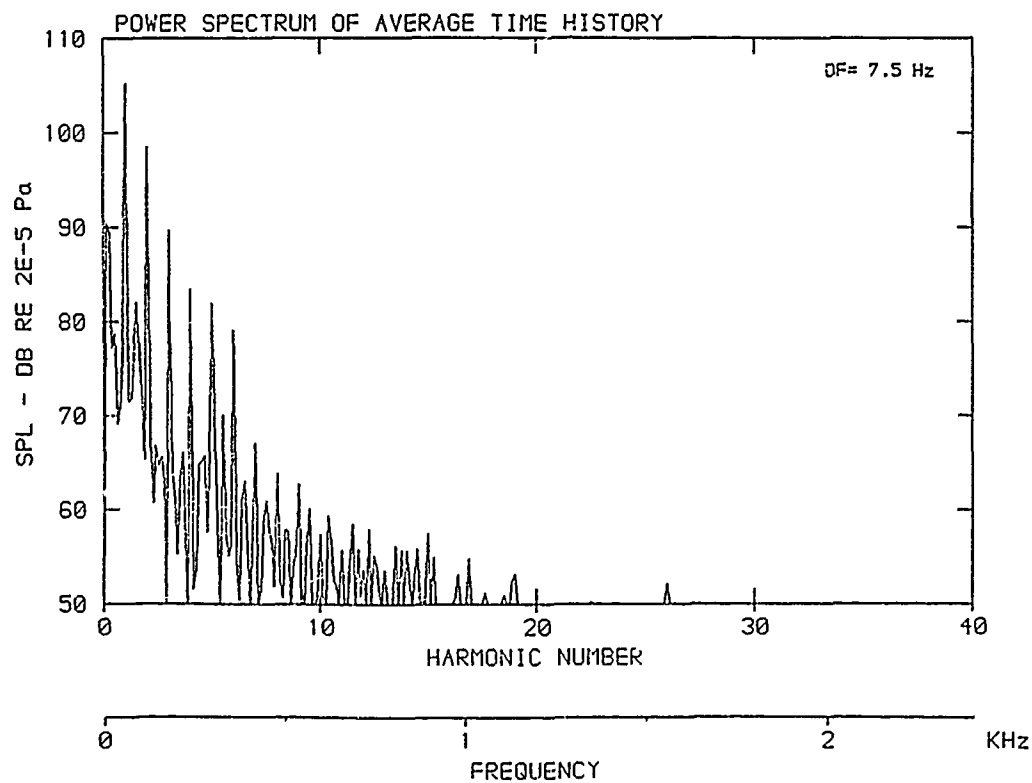
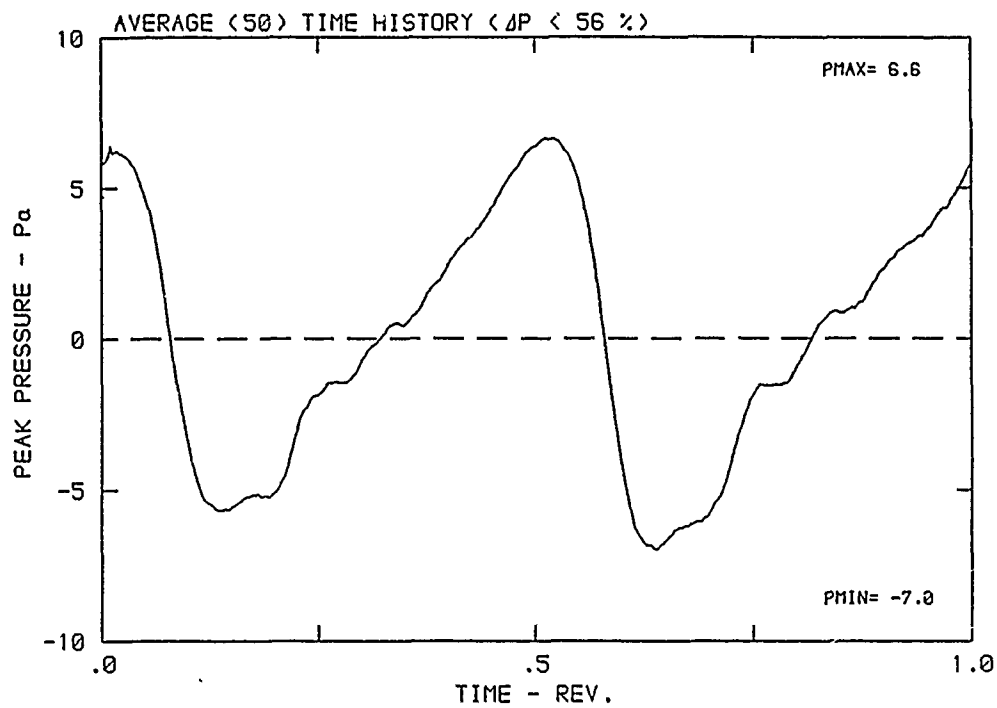
$\beta$ : 23.7° MH: .5838 n: 1800 rpm v/u: .269  $\phi$ : .0° T: 287.1 K





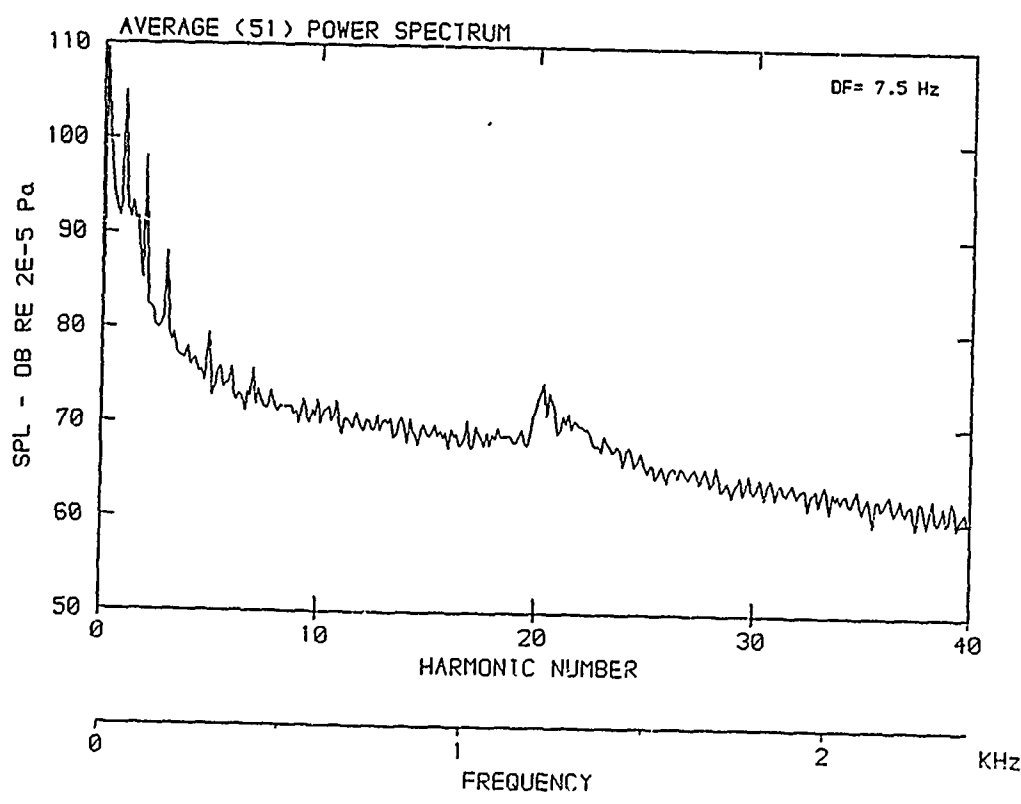
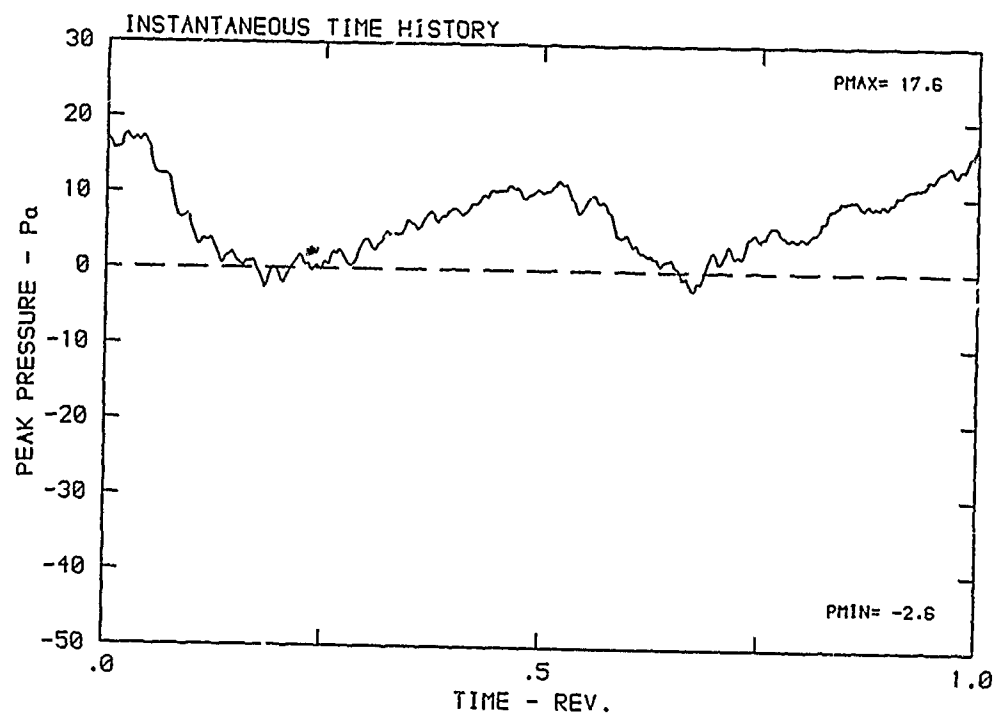
DATA POINT: CN-3    RUN: 101    MP: 5

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



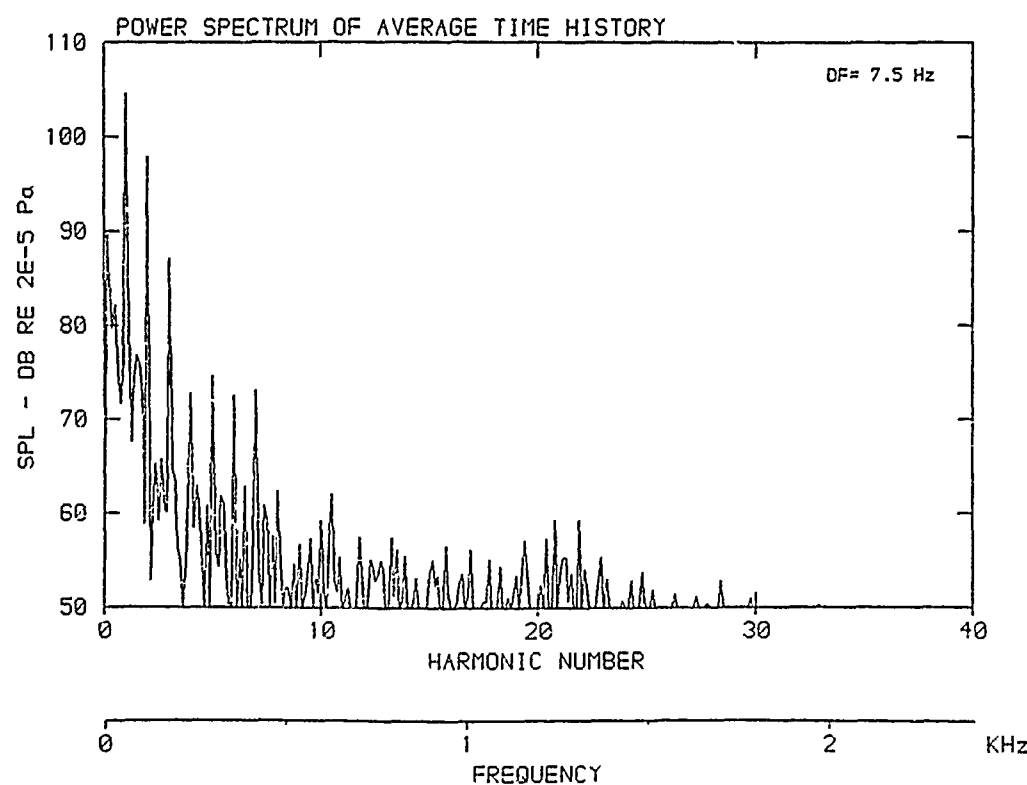
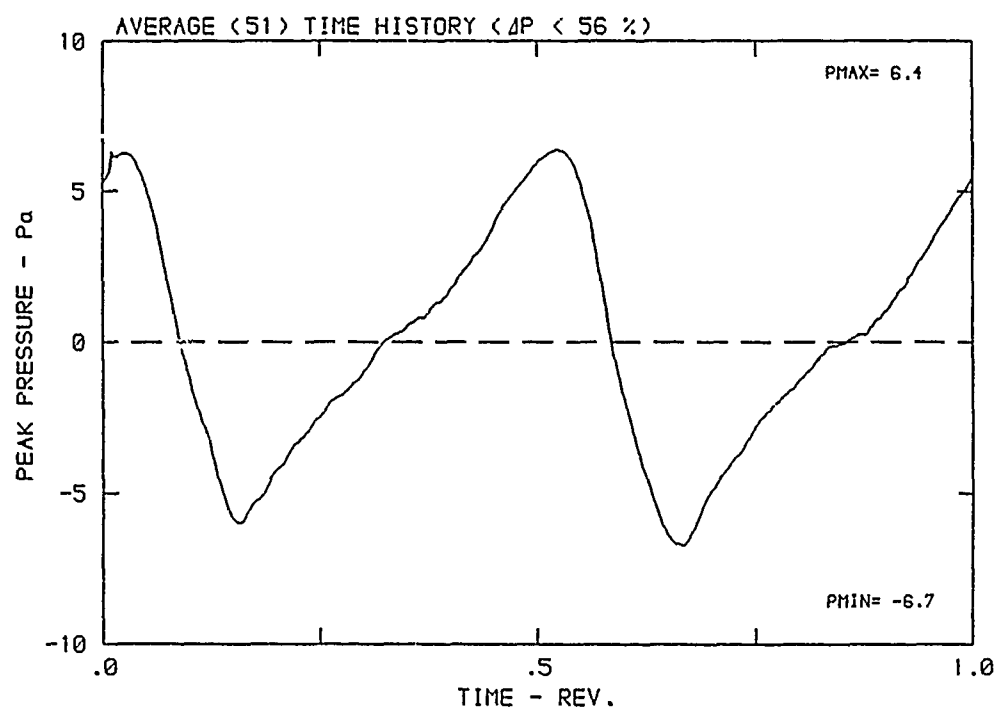
DATA POINT: CN-3 RUN: 101 MP: 6

$\beta$ : 23.7° MH: .5838 n: 1800 rpm v/u: .269  $\phi$ : .0° T: 287.1 K



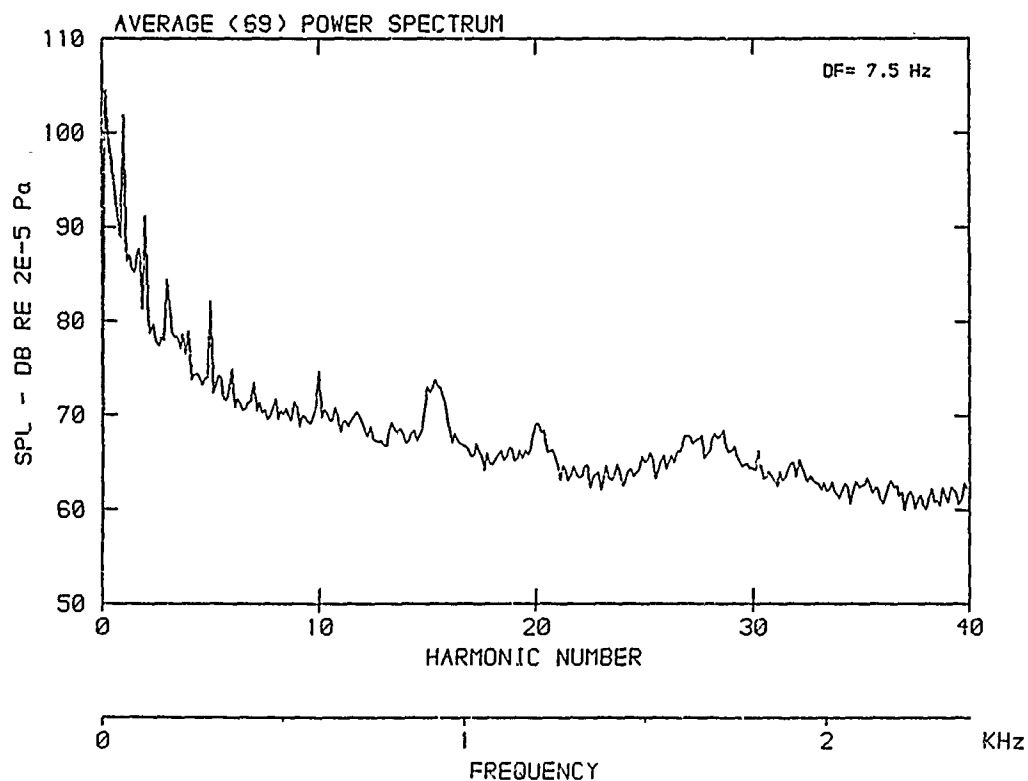
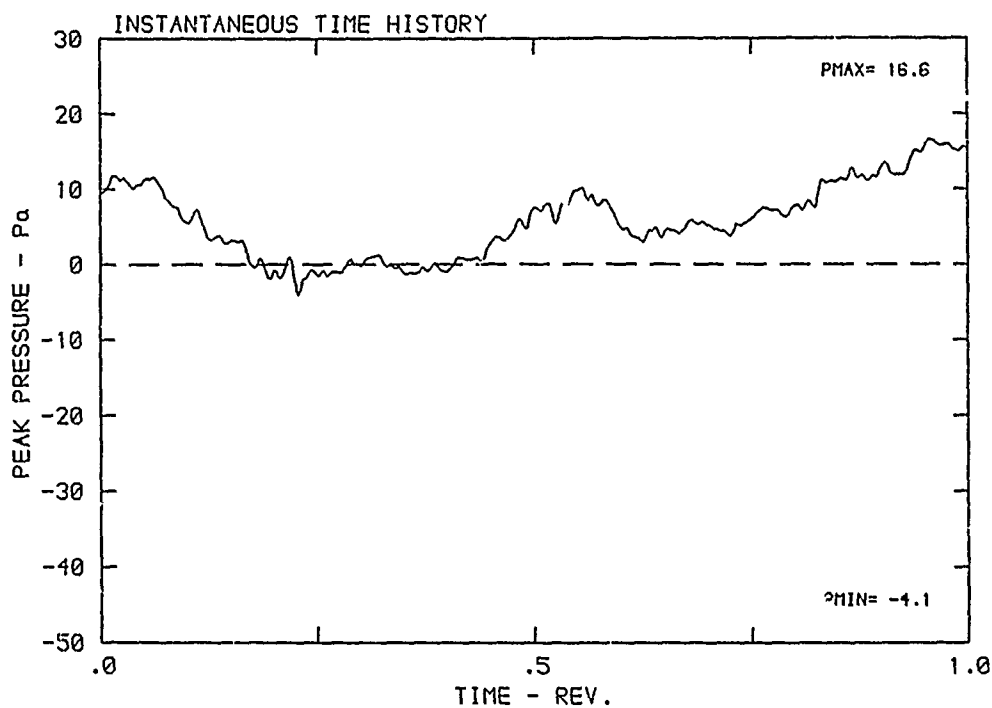
DATA POINT: CN-3    RUN: 101    MP: 6

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



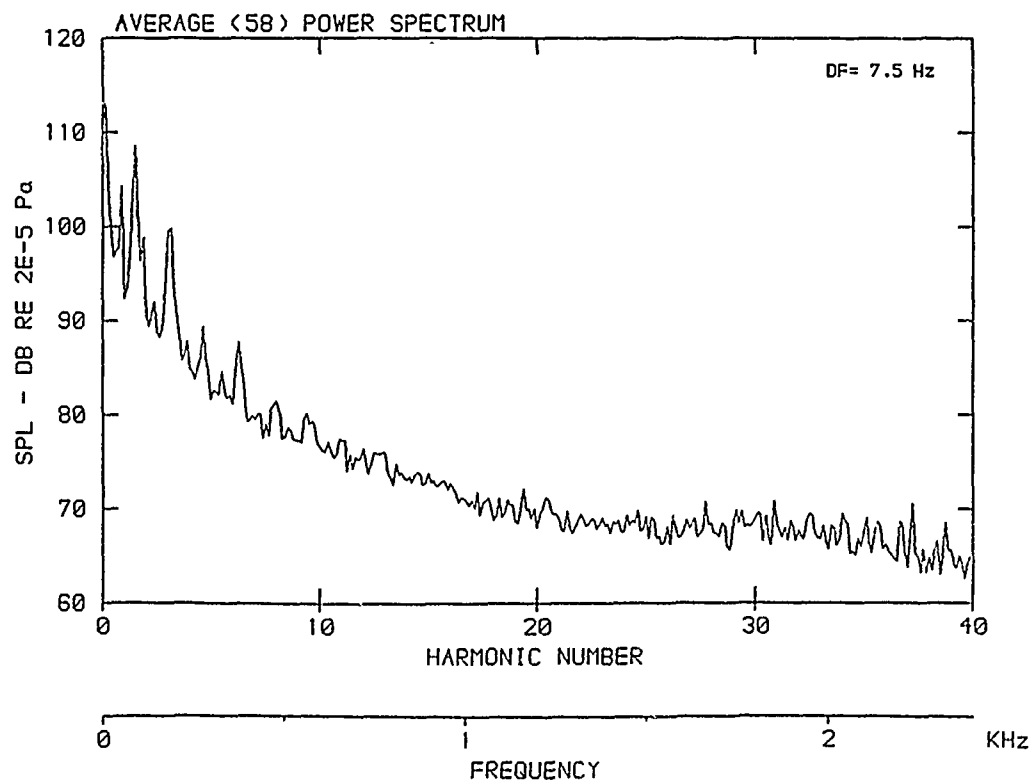
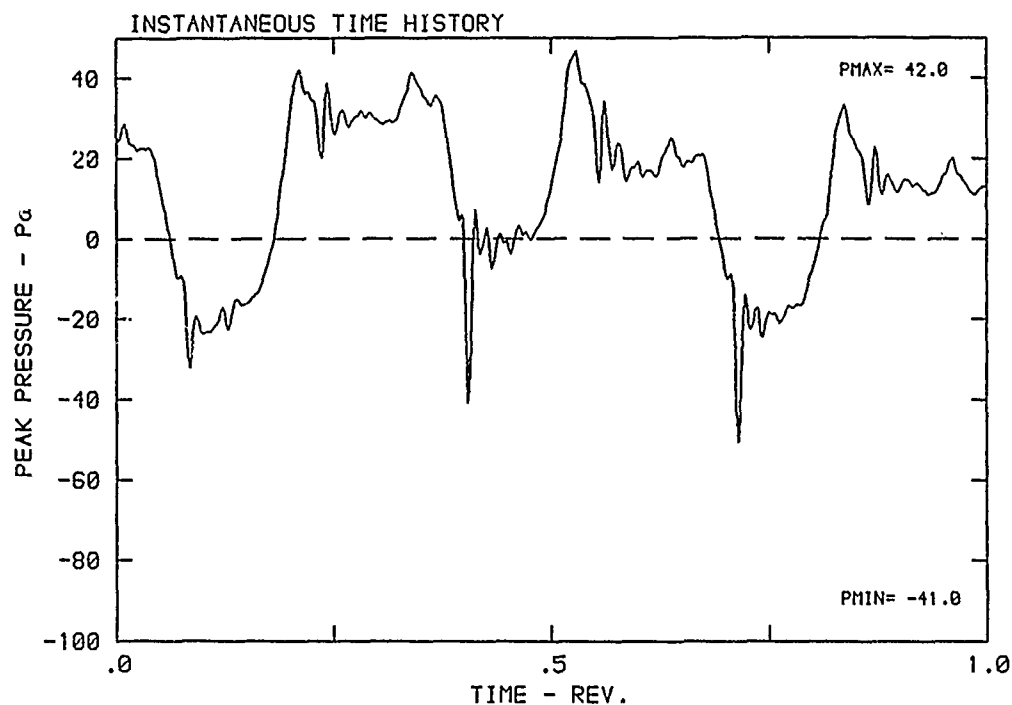
DATA POINT: CN-3    RUN: 101    MP: 7

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



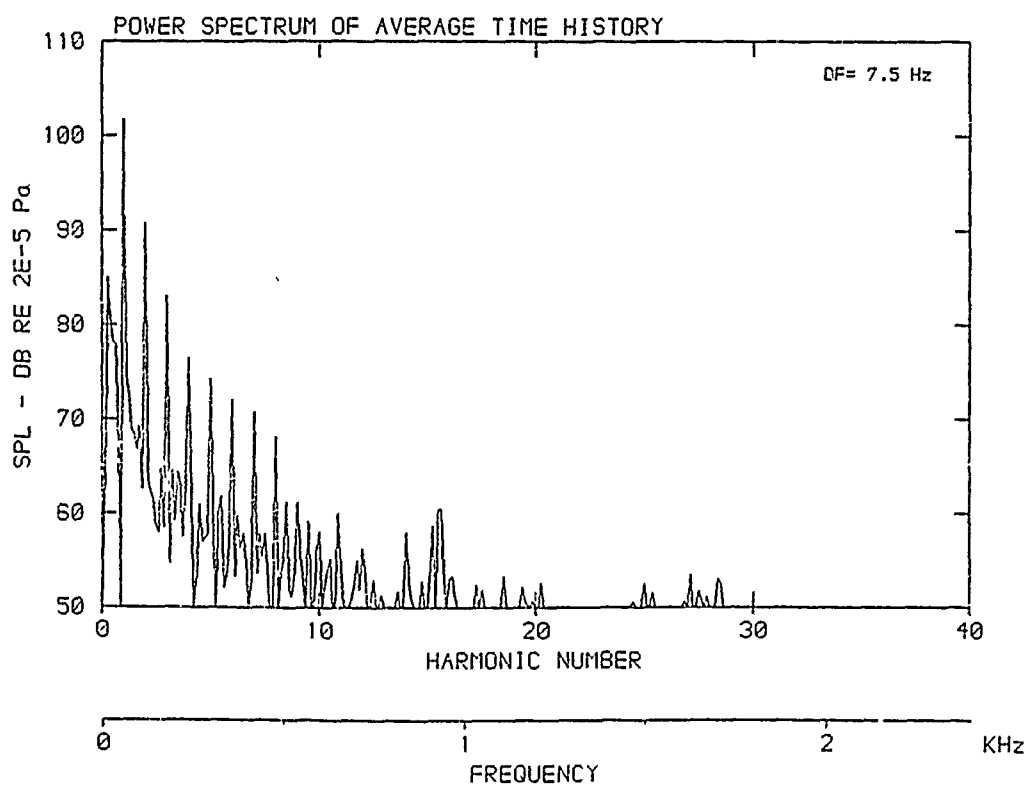
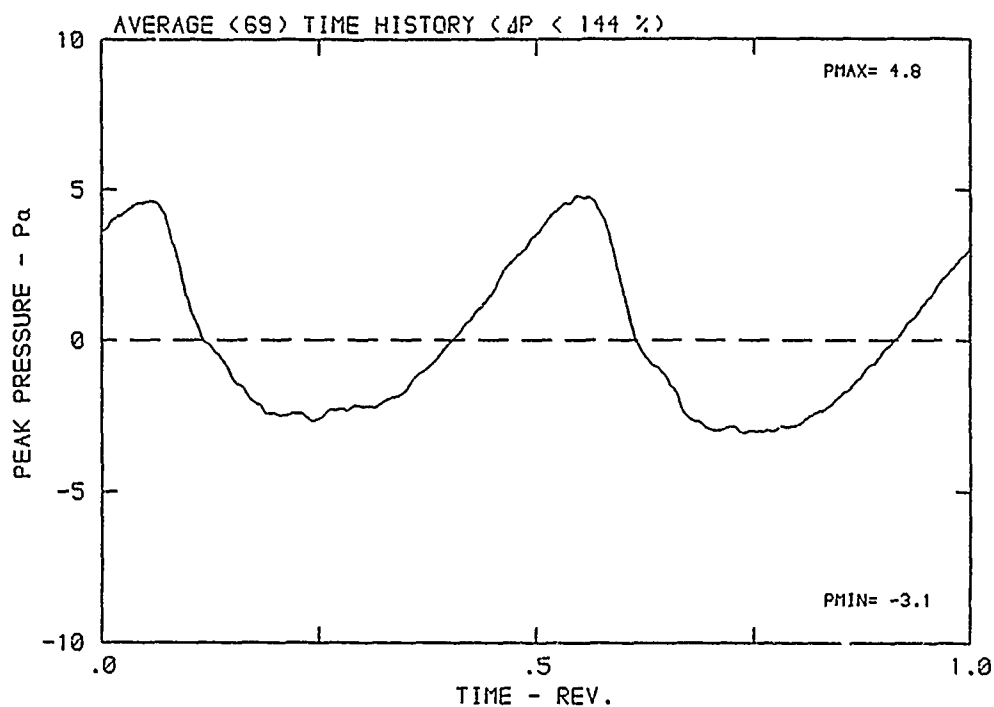
DATA POINT: CN-3 RUN: 101 MP: 8

$\beta$ : 23.7° MH: .5838 n: 1800 rpm v/u: .269  $\phi$ : .0° T: 287.1 K



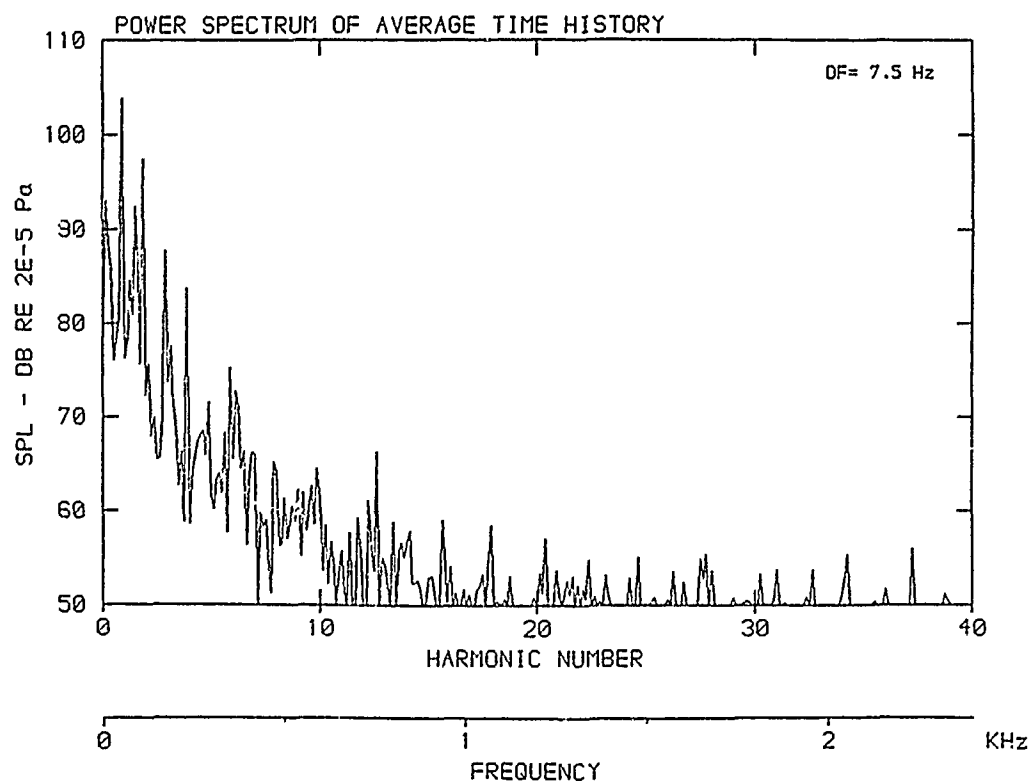
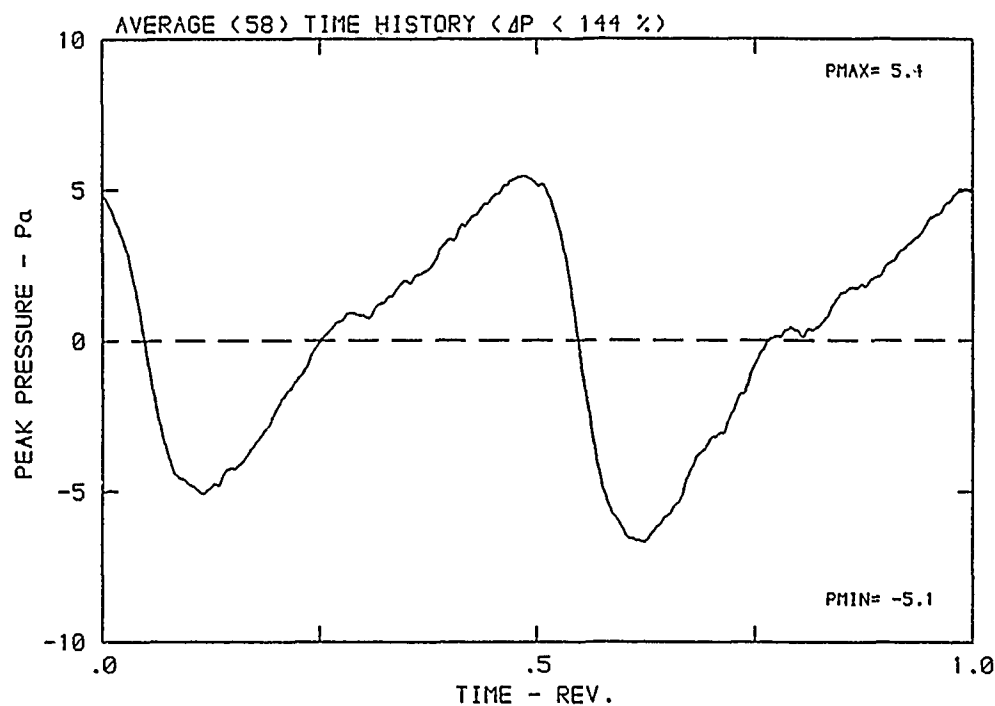
DATA POINT: CN-3    RUN: 101    MP: 7

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



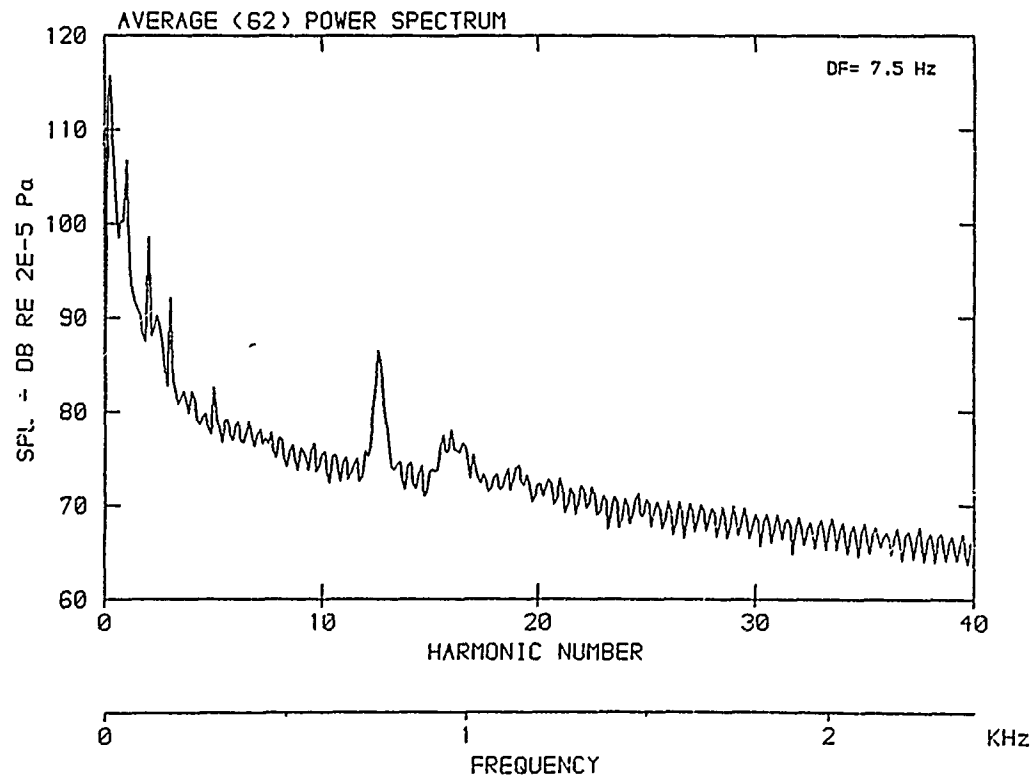
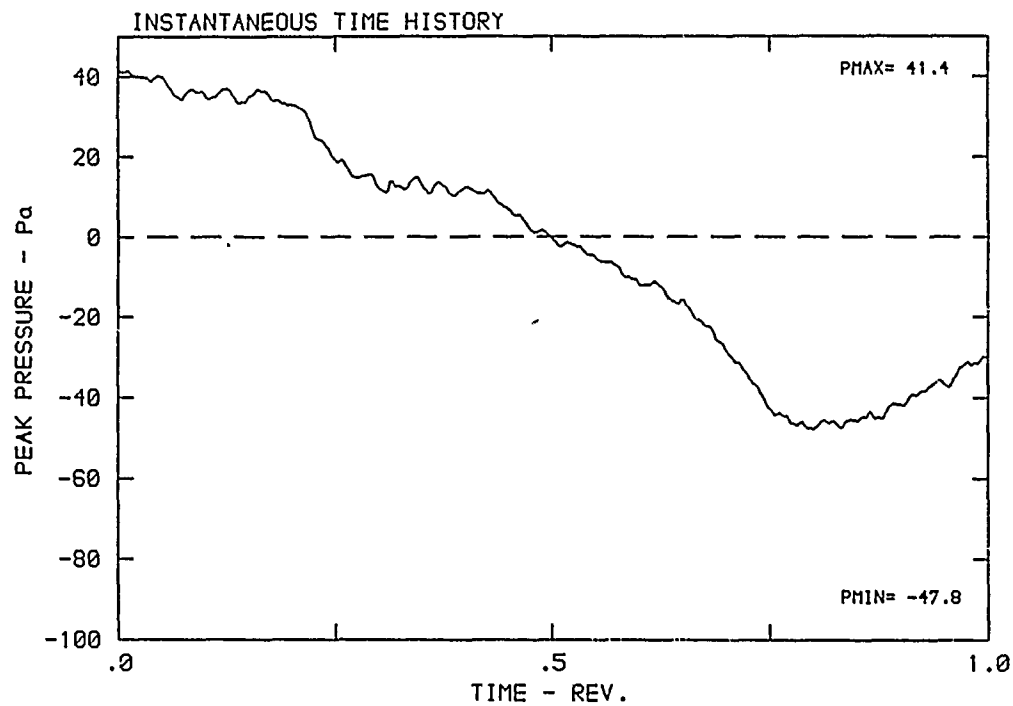
DATA POINT: CN-3    RUN: 101    MP: 8

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm    v/u: .269     $\phi$ : .0°    T: 287.1 K



DATA POINT: CN-3 RUN: 101 MP: 9

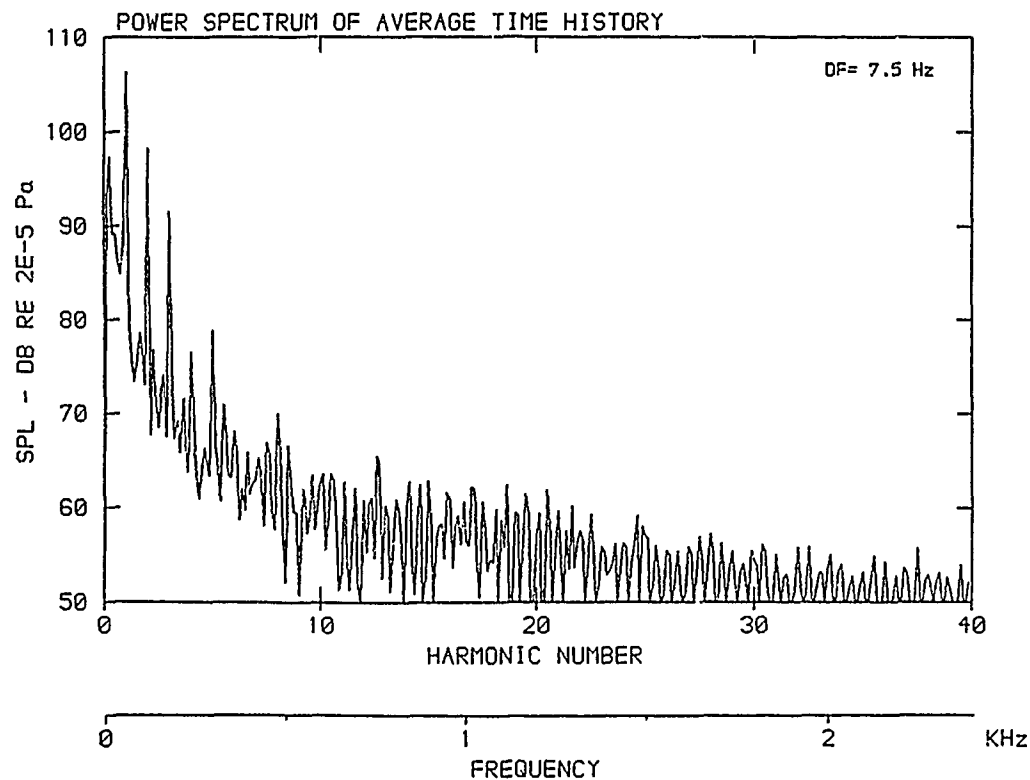
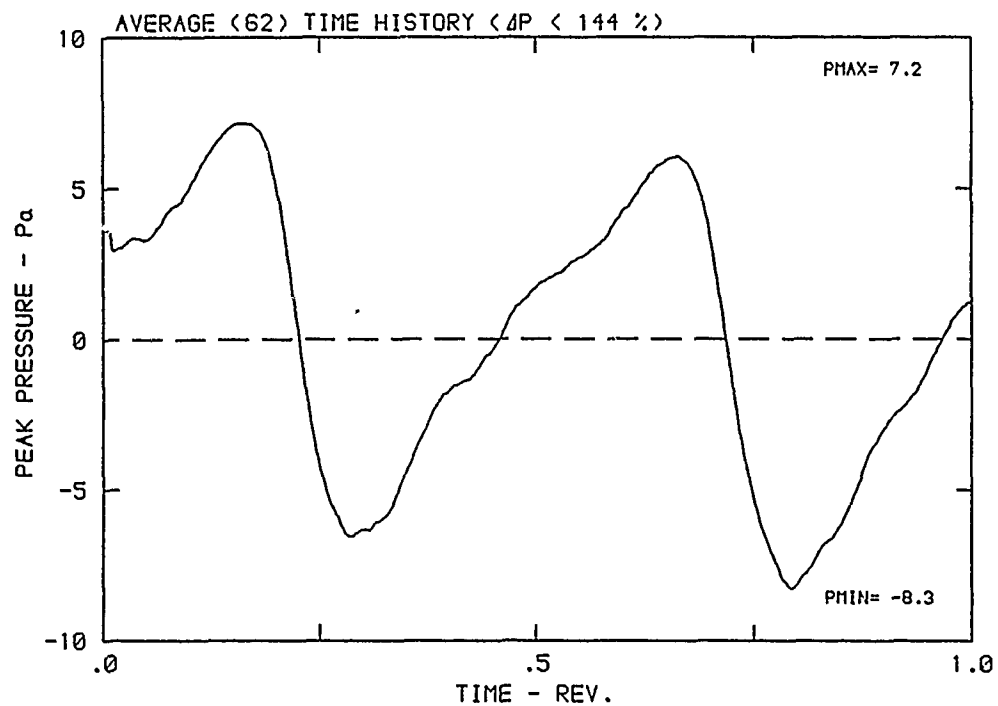
$\beta$ : 23.7° MH: .5838 n: 1800 rpm  $v/u$ : .269  $\phi$ : .0° T: 287.1 K





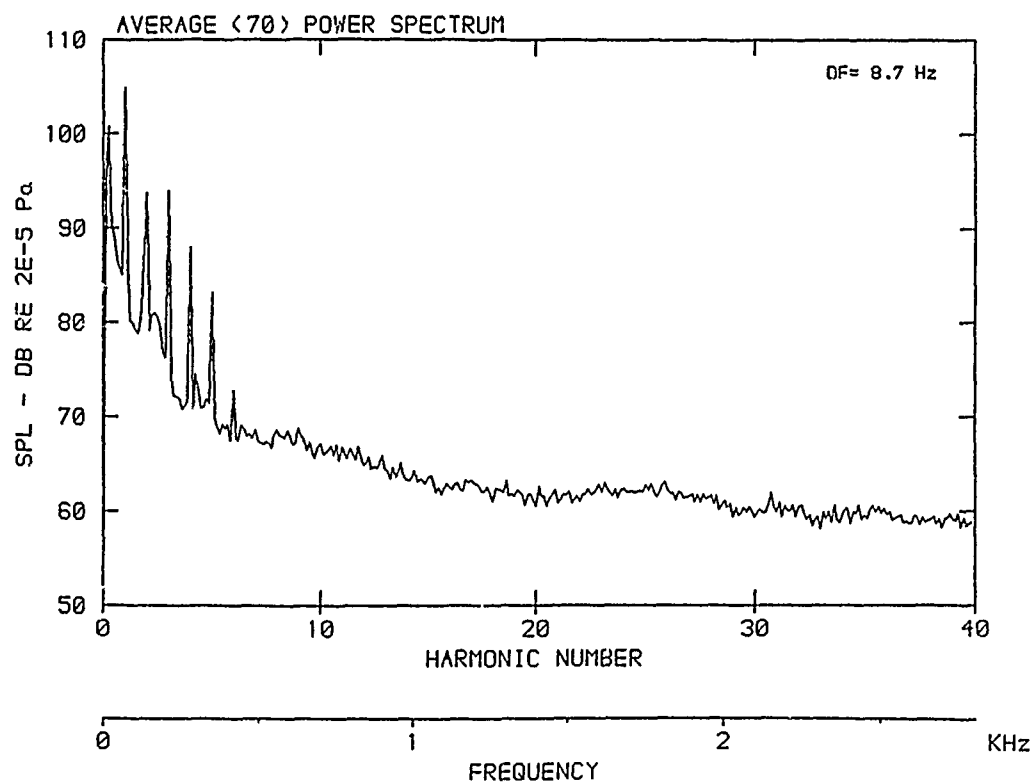
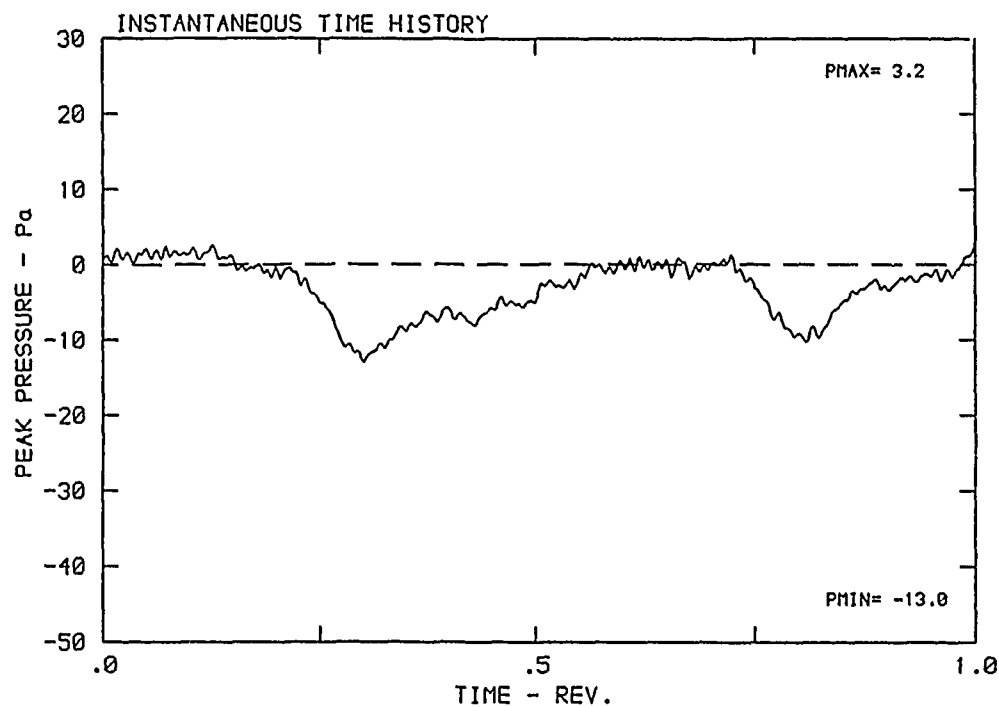
DATA POINT: CN-3    RUN: 101    MP: 9

$\beta$ : 23.7°    MH: .5838    n: 1800 rpm     $v/u$ : .269     $\phi$ : .0°    T: 287.1 K



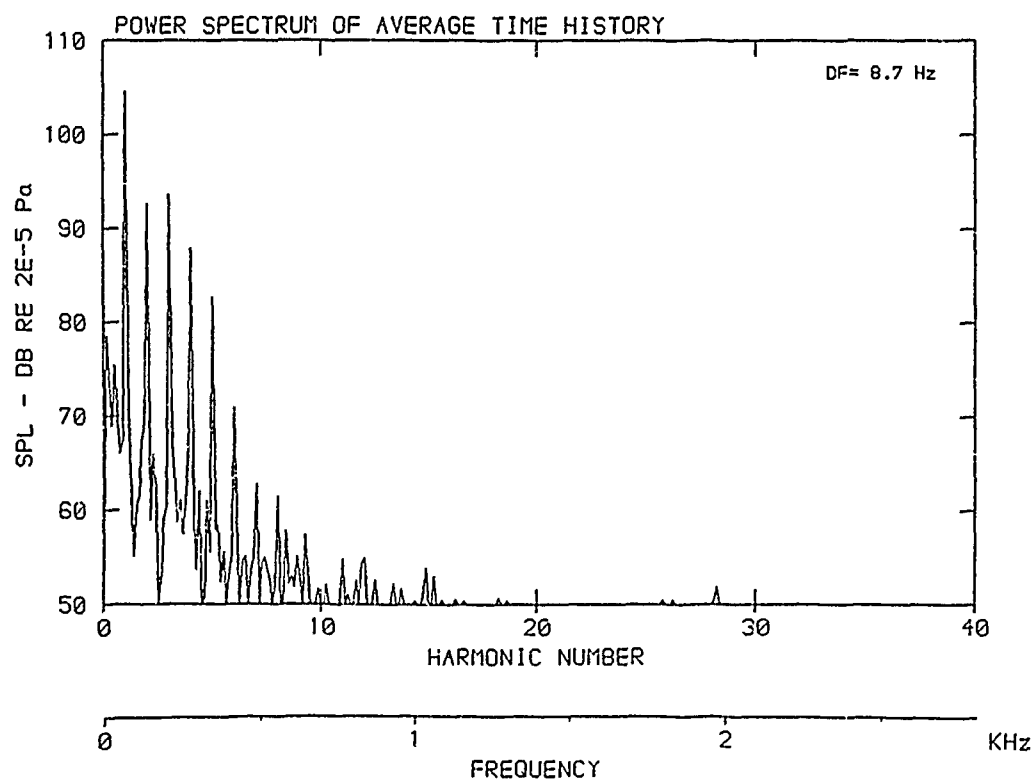
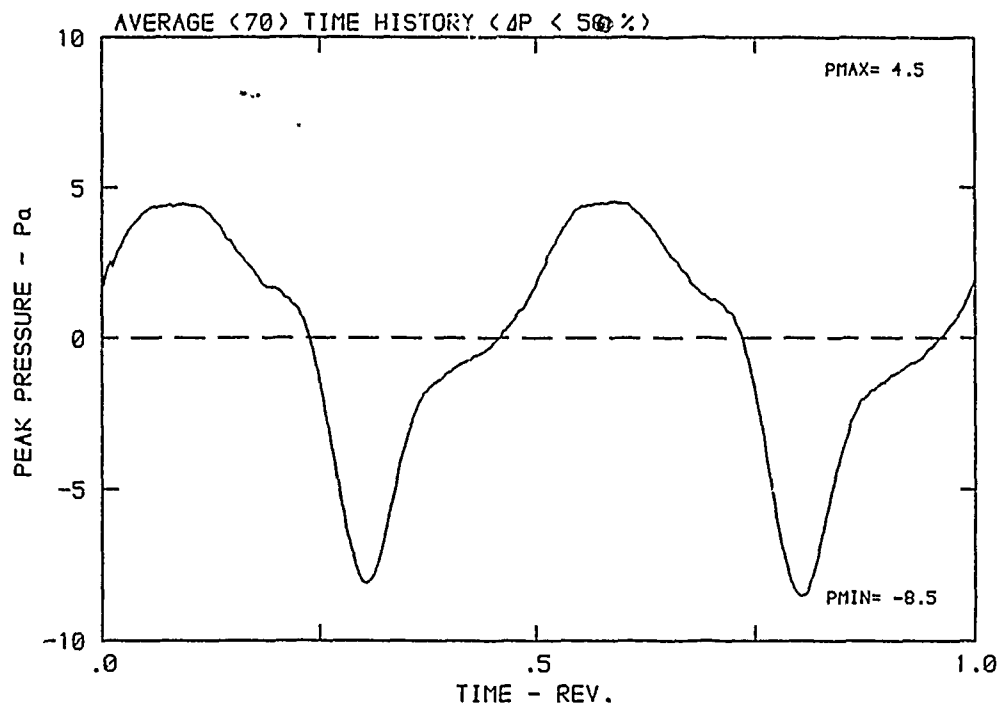
DATA POINT: CN-4 RUN: 100 MP: 1

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



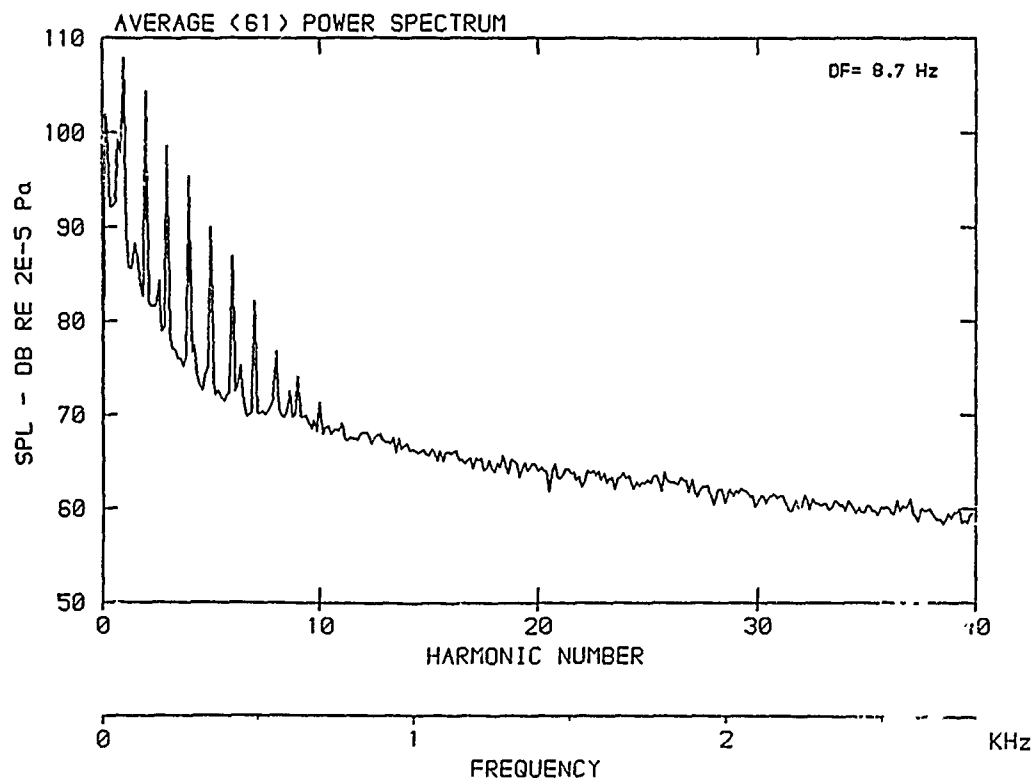
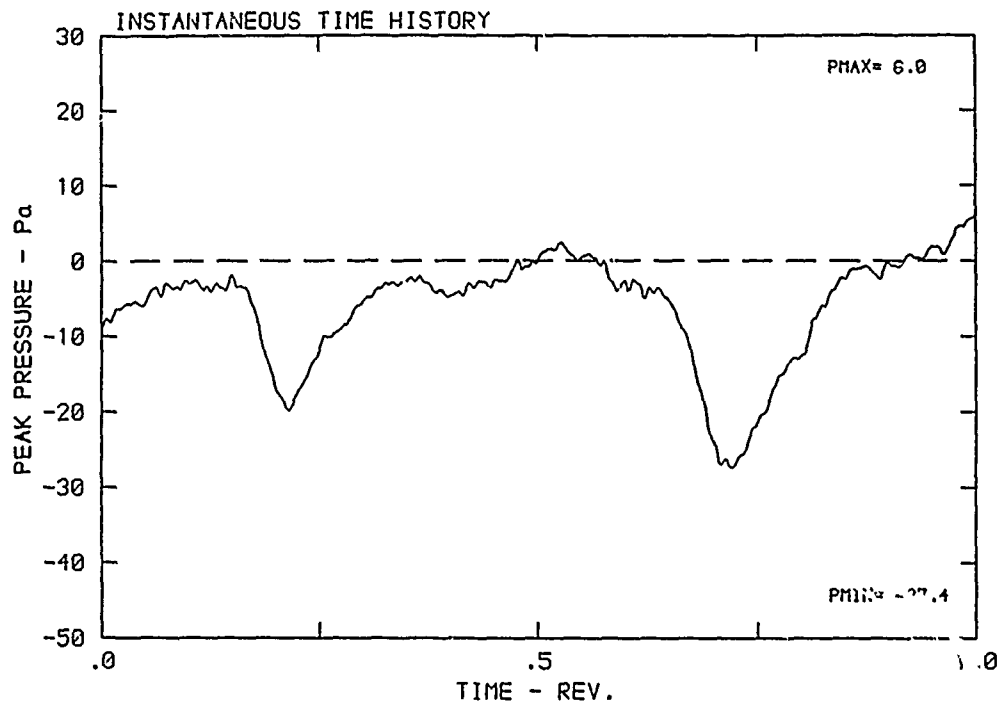
DATA POINT: CN-4    RUN: 100    MP: 1

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm     $v/u$ : .229     $\phi$ : .0°    T: 286.6 K



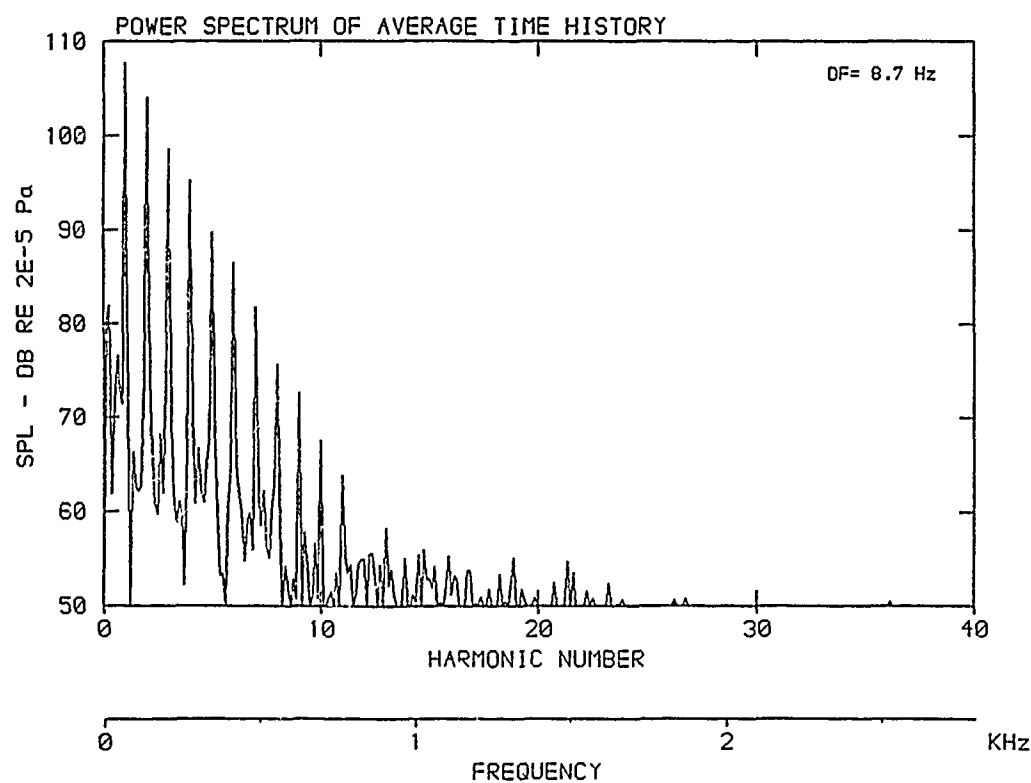
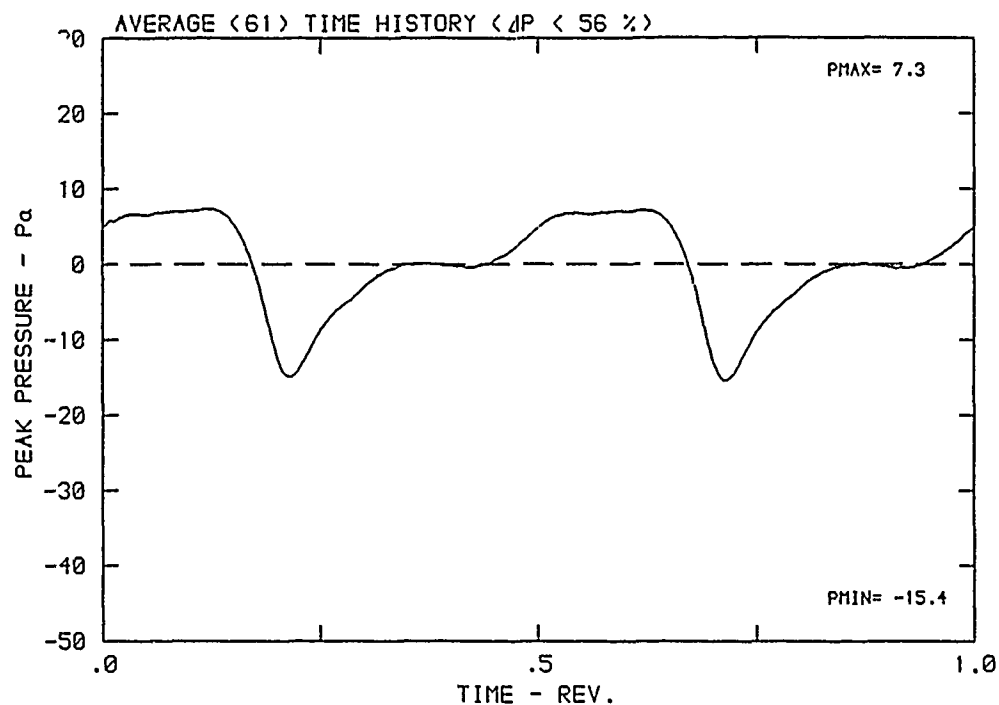
DATA POINT: CN-4    RUN: 100    MP: 2

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 286.6 K



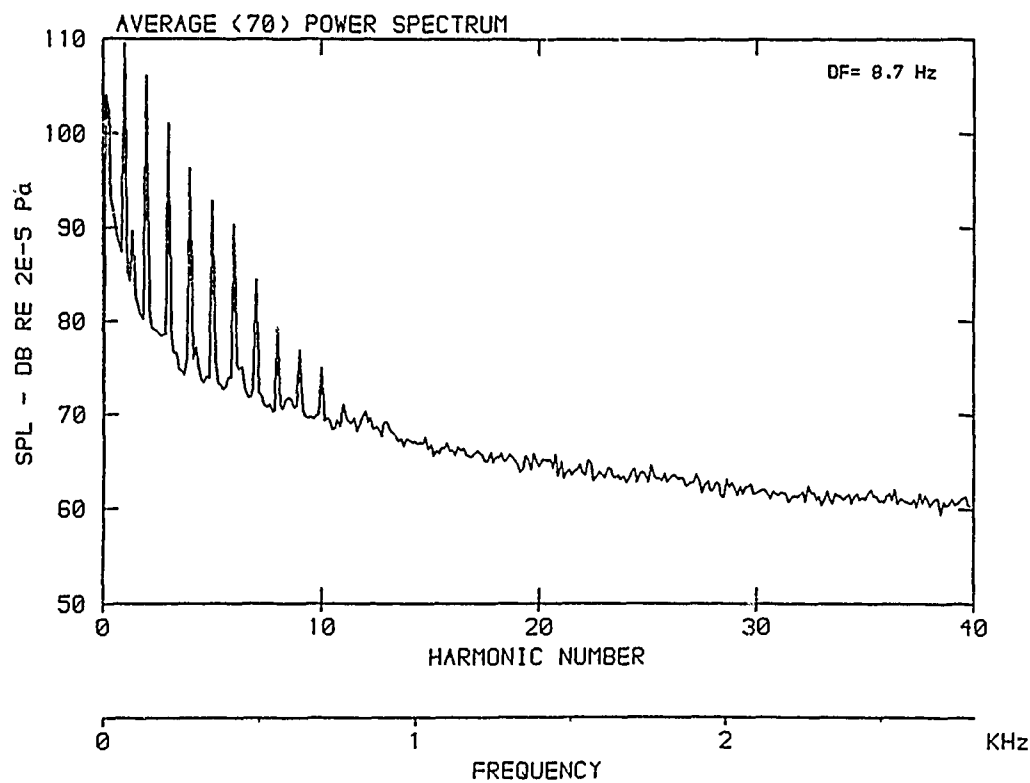
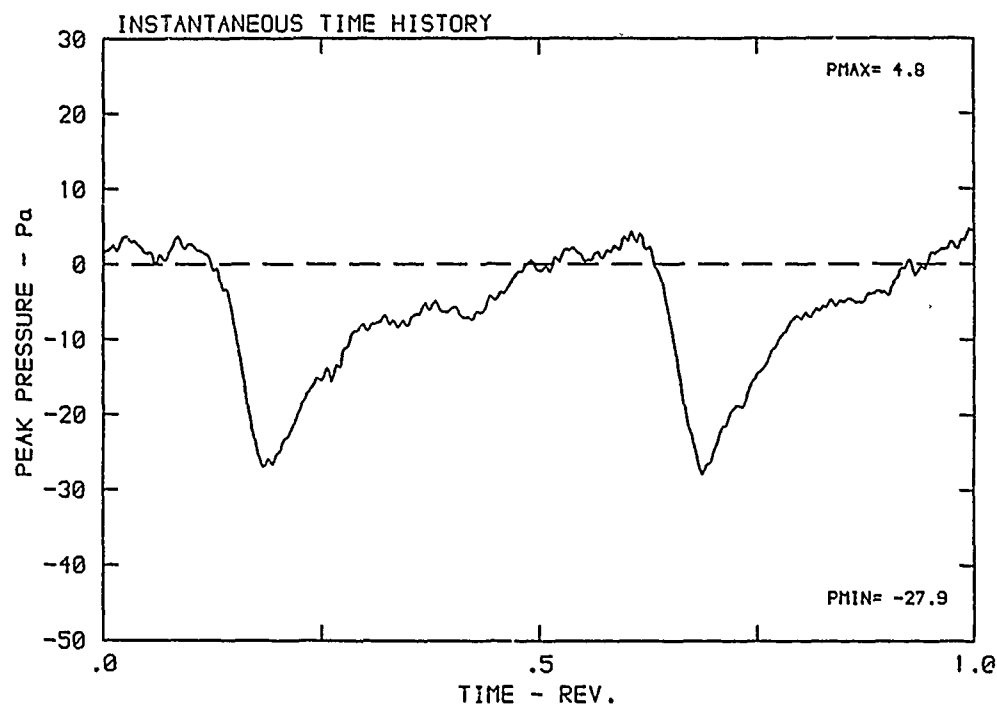
DATA POINT: CN-4 RUN: 100 MP: 2

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



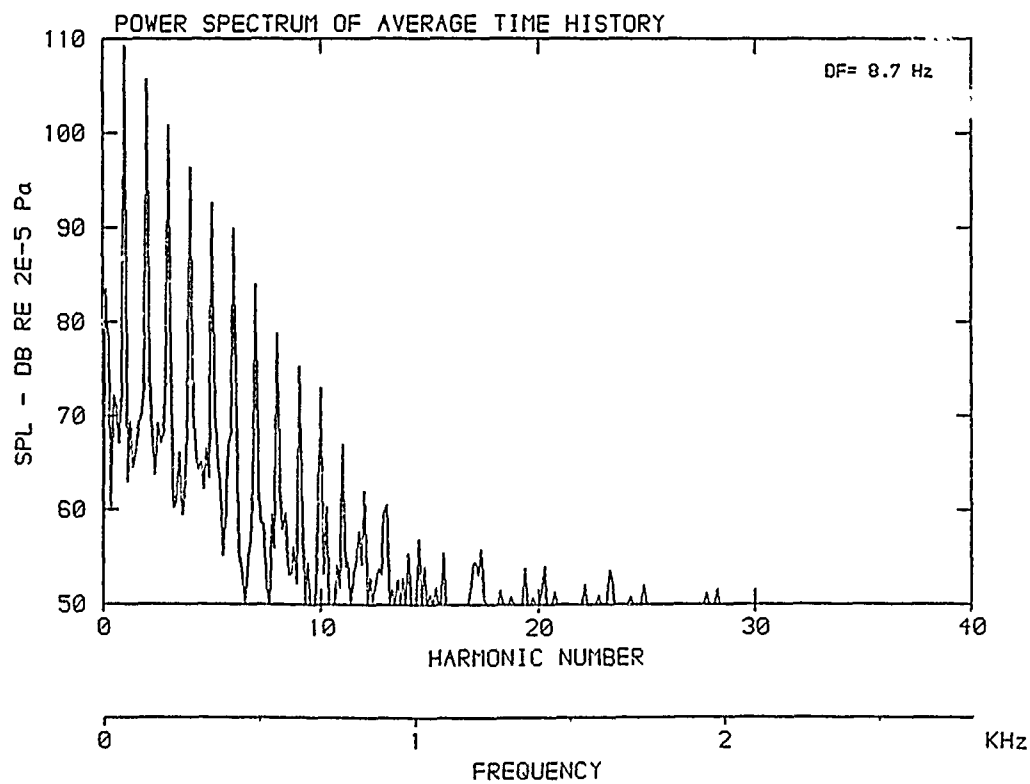
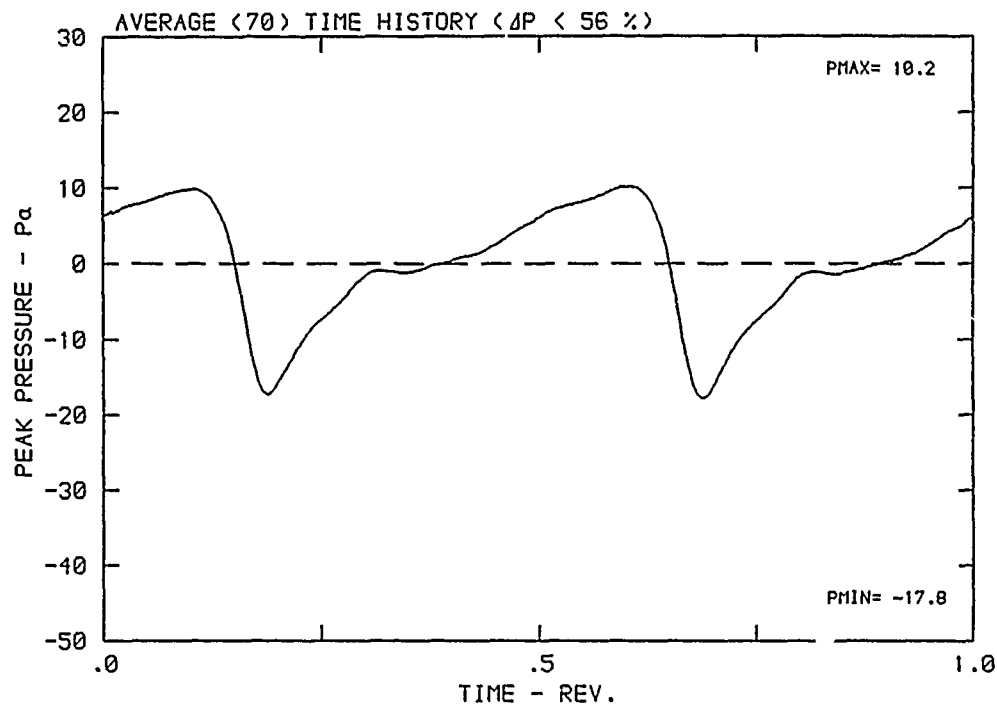
DATA POINT: CN-4 RUN: 100 MP: 3

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



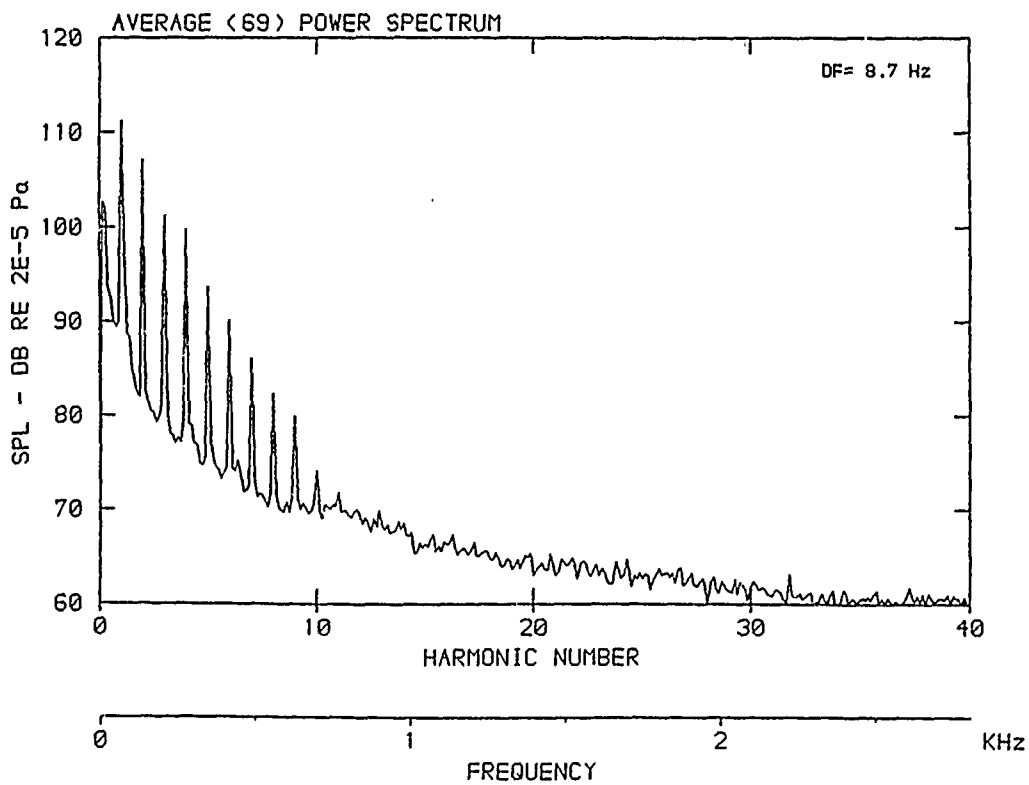
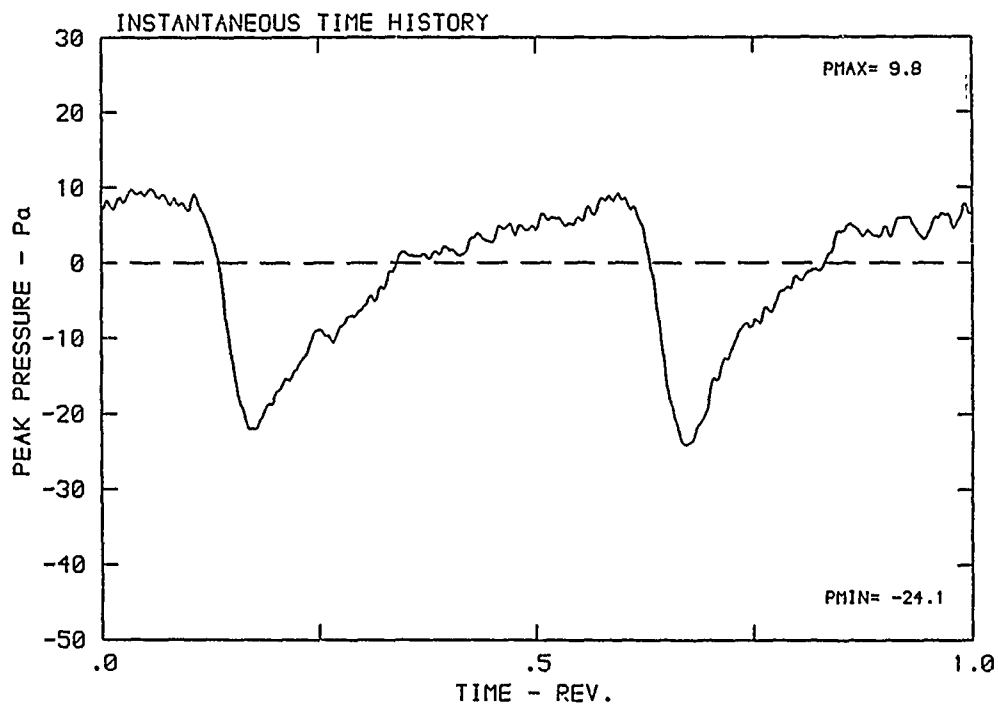
DATA POINT: CN-4    RUN: 100    MP: 3

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 286.6 K



DATA POINT: CN-4 RUN: 100 MP: 4

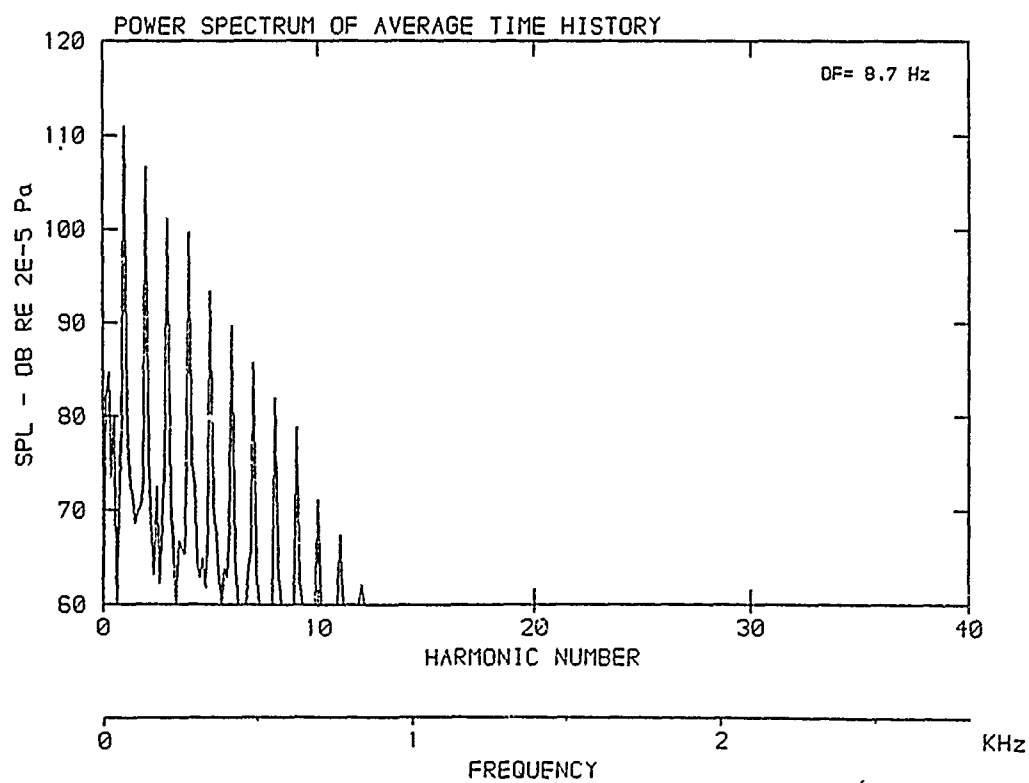
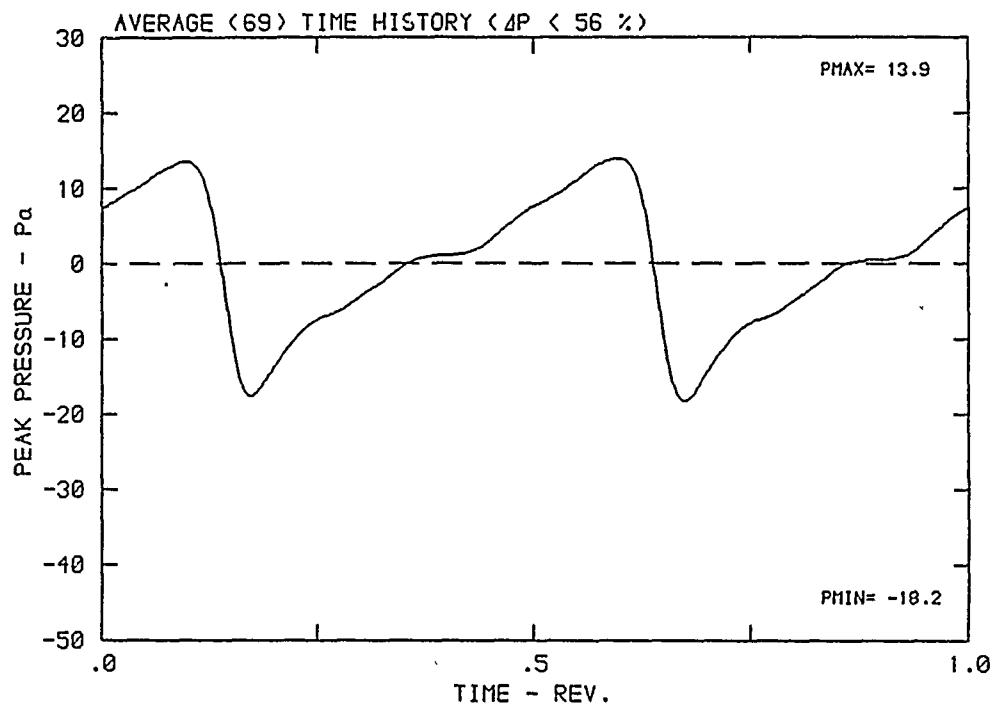
$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K





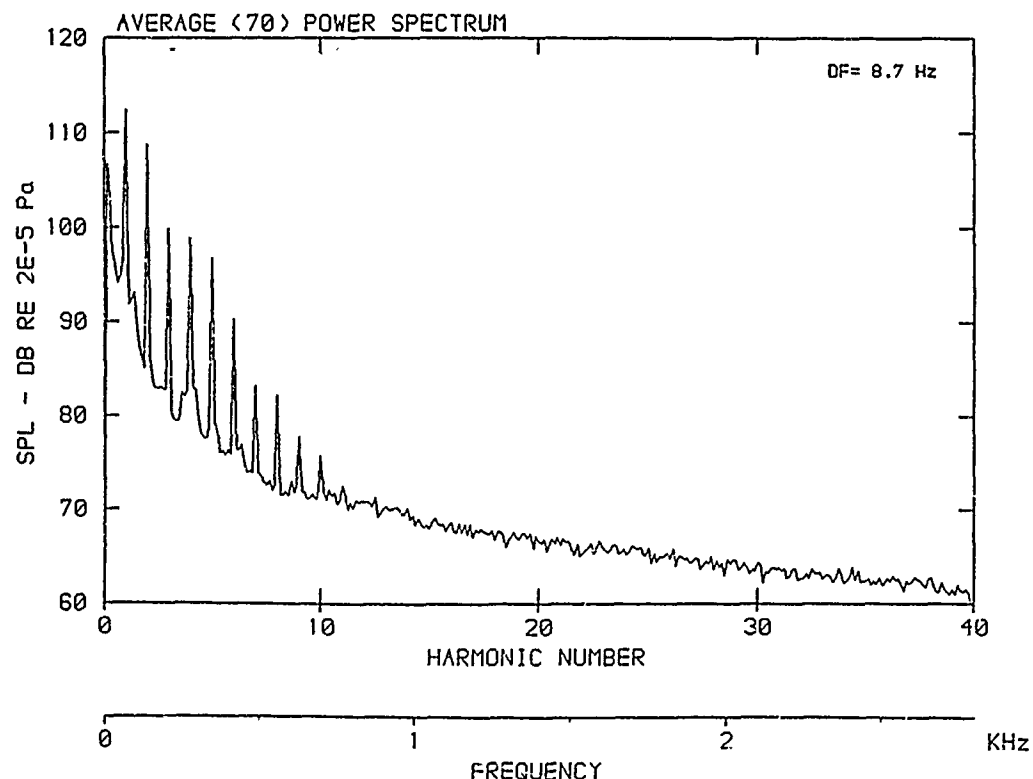
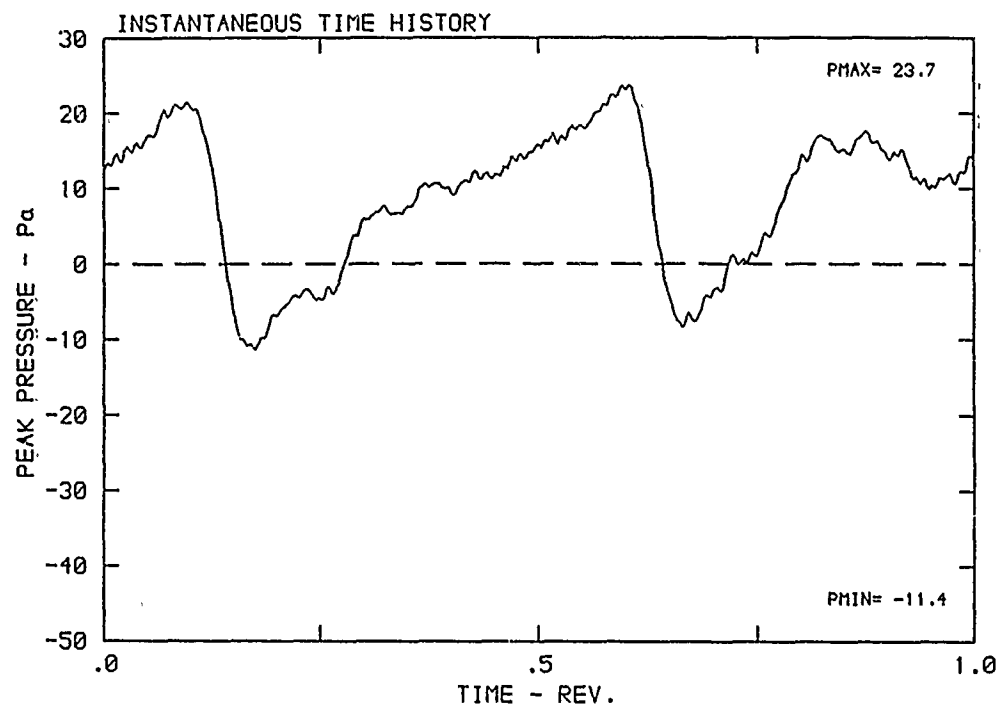
DATA POINT: CN-4    RUN: 100    MP: 4

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 286.6 K



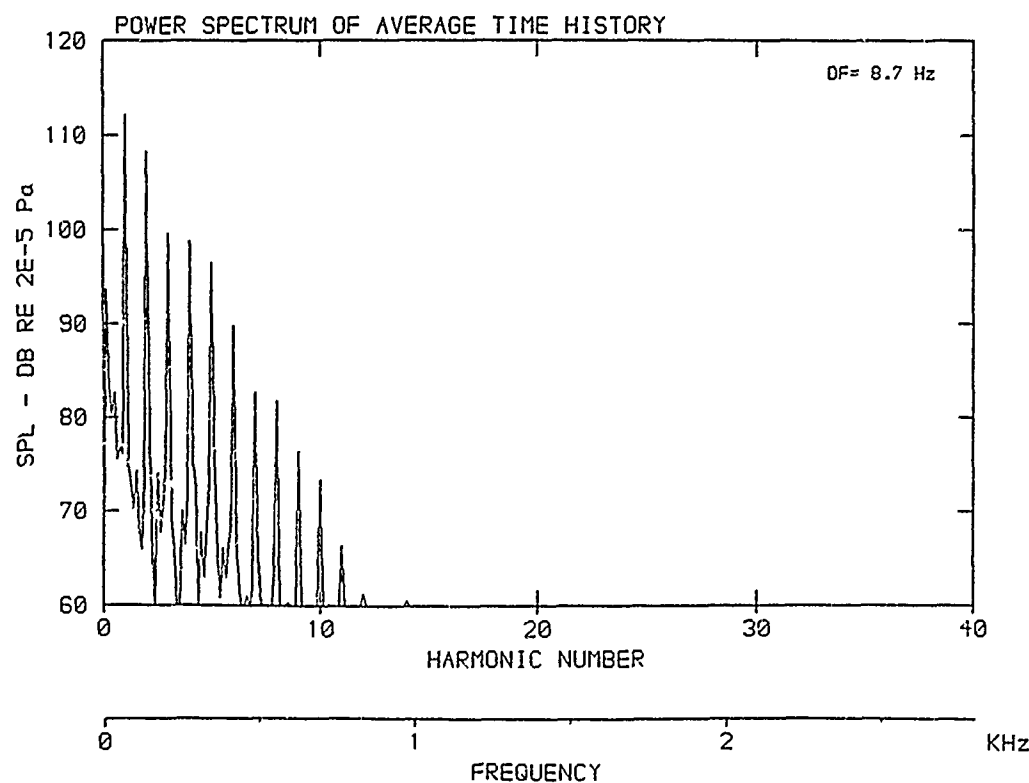
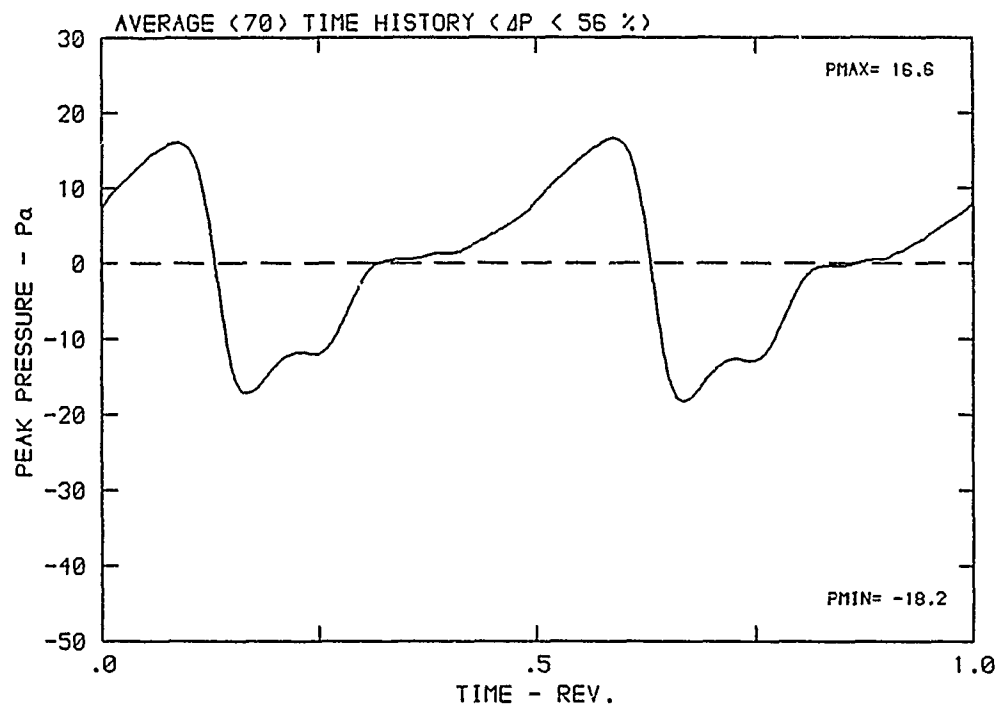
DATA POINT: CN-4 RUN: 100 MP: 5

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



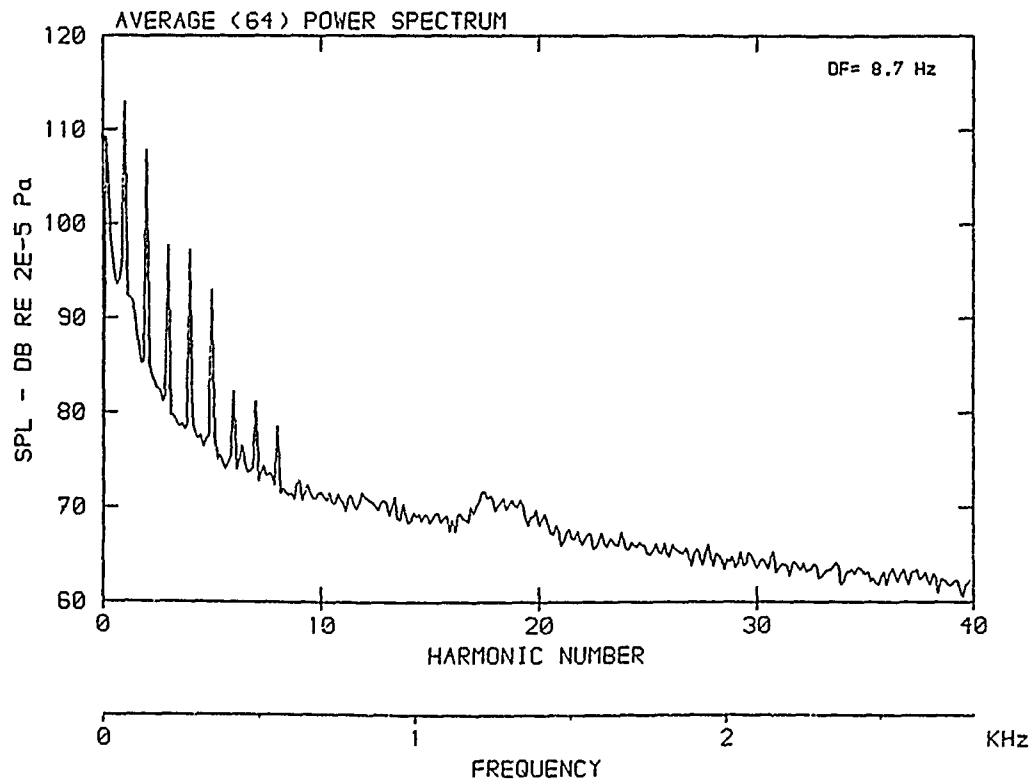
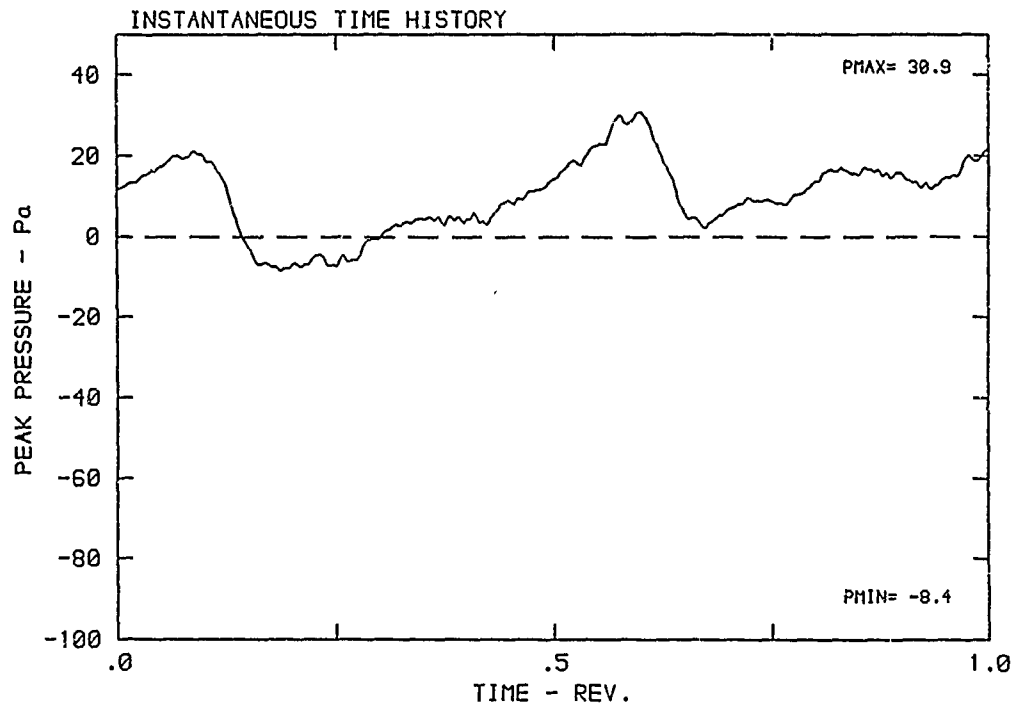
DATA POINT: CN-4 RUN: 100 MP: 5

$\beta$ : 23.7° MH: .6753 n: 2100 rpm  $v/u$ : .229  $\phi$ : .0° T: 286.6 K



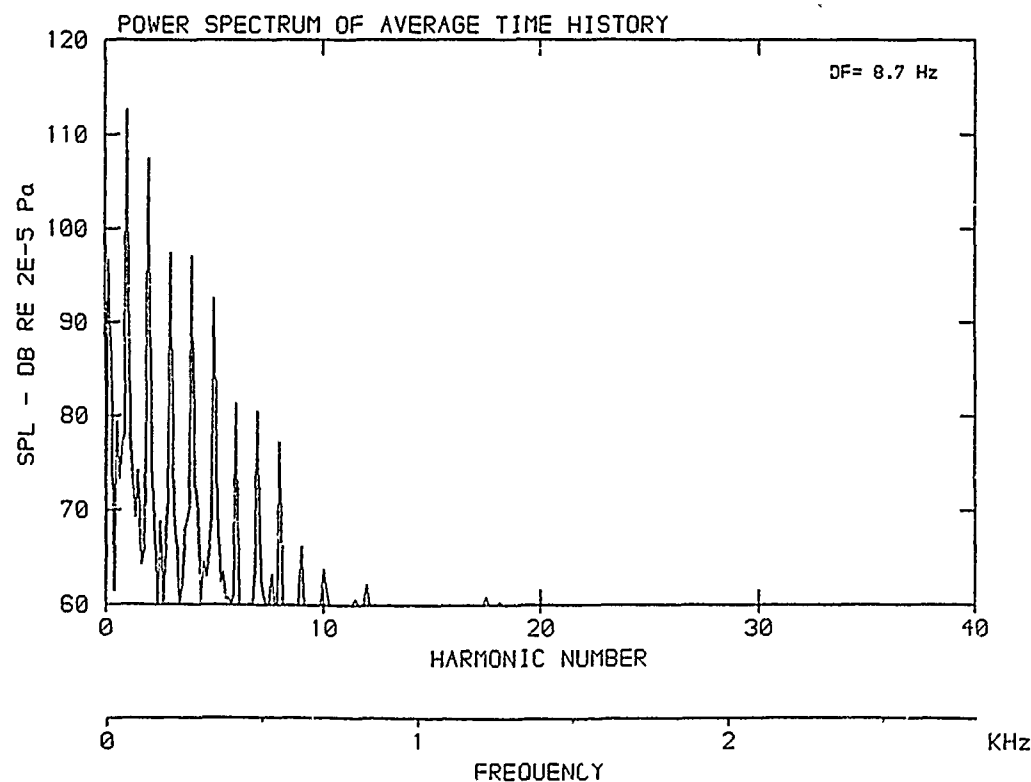
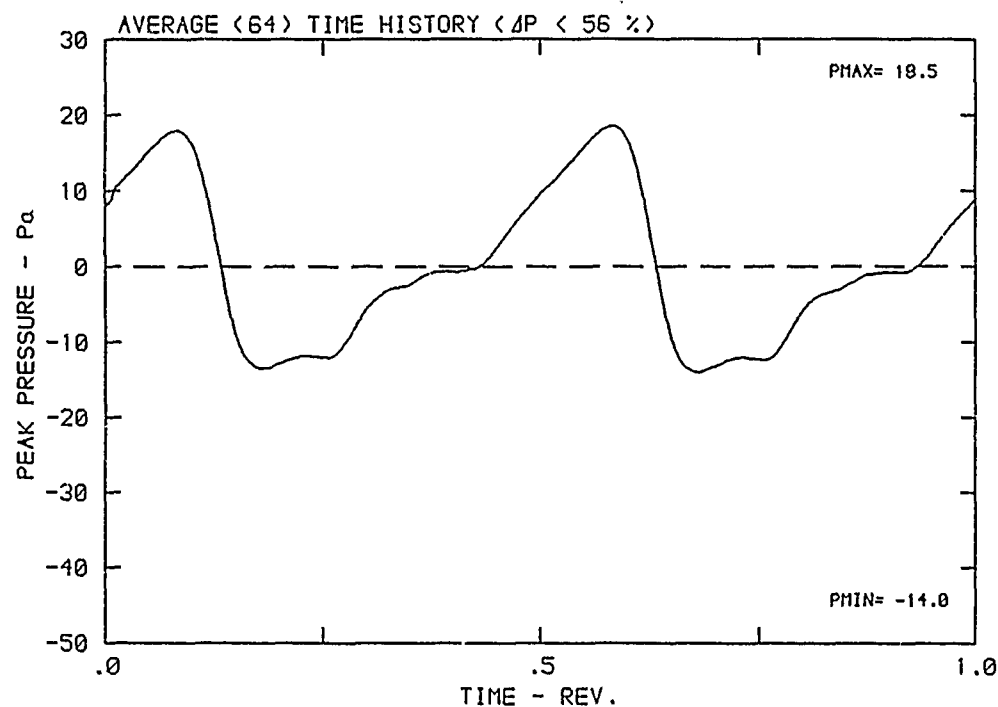
DATA POINT: CN-4 RUN: 100 MP: 6

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



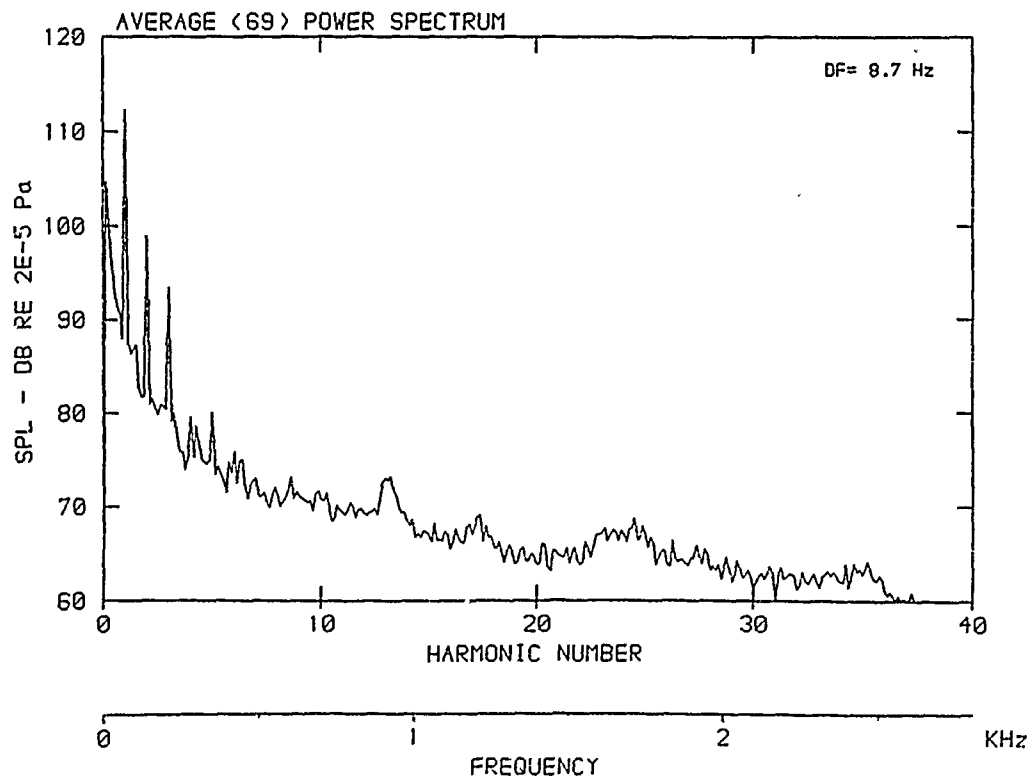
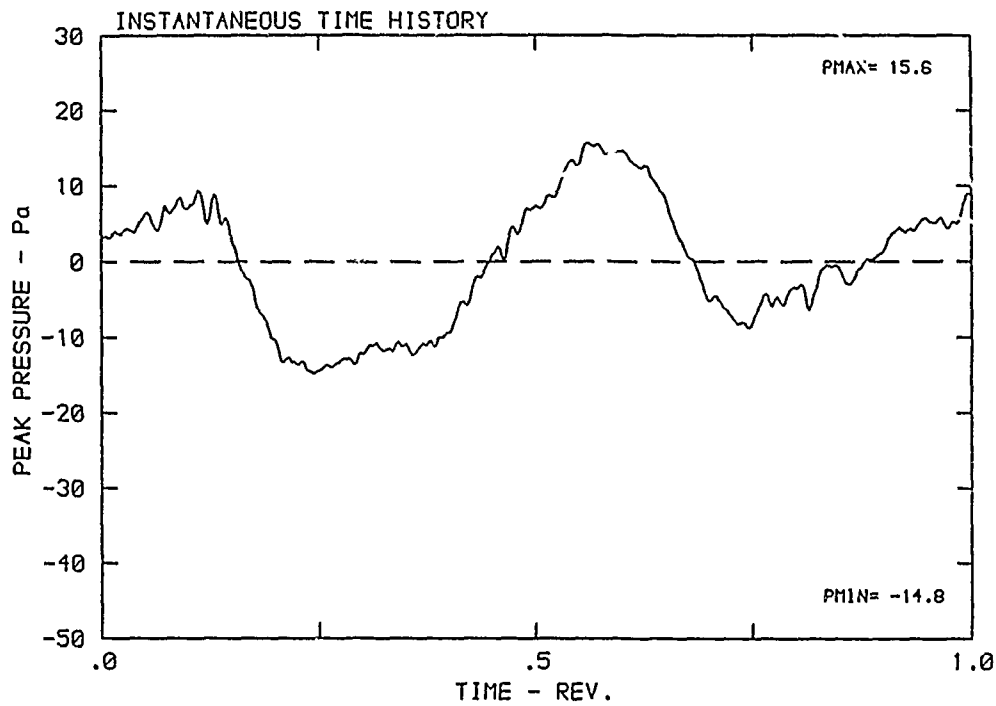
DATA POINT: CN-4 RUN: 100 MP: 6

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



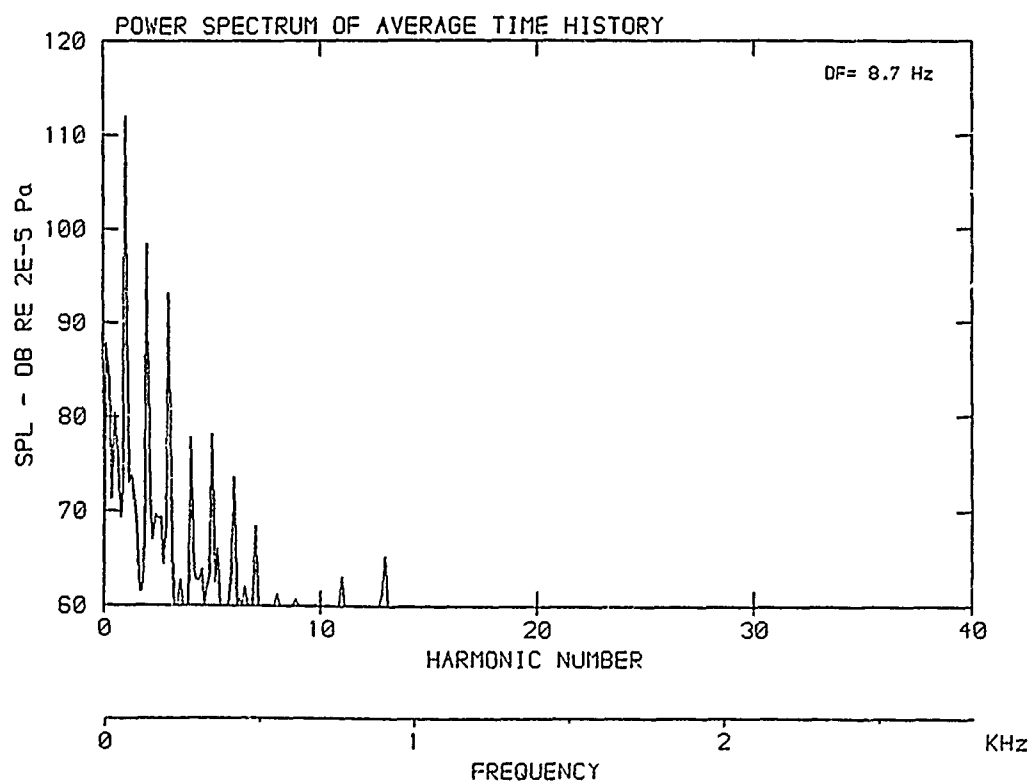
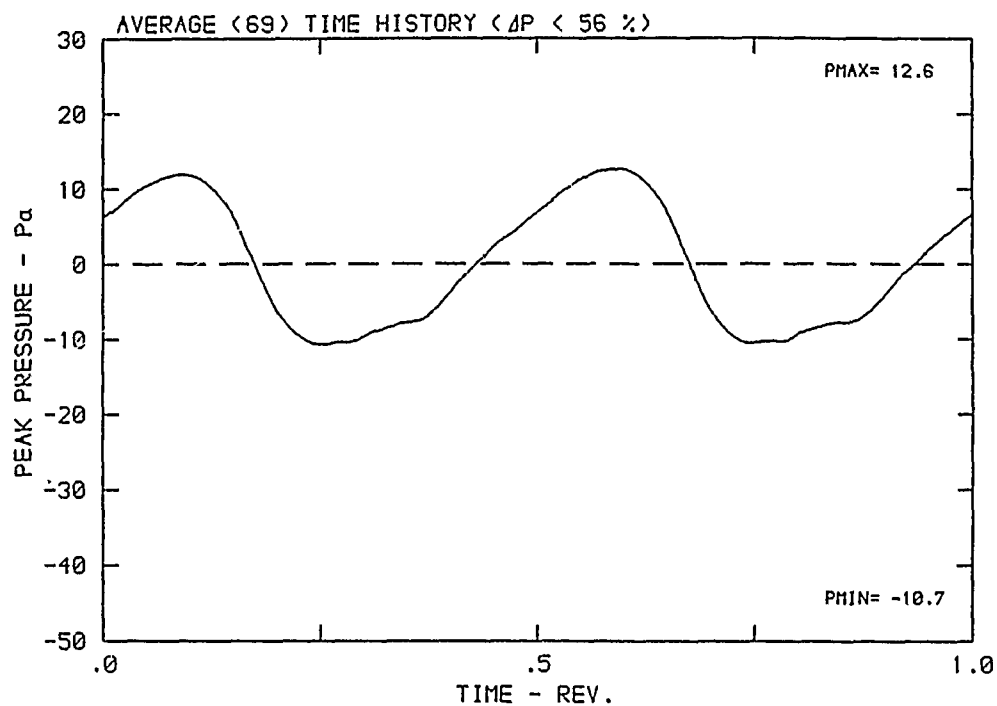
DATA POINT: CN-4 RUN: 100 MP: 7

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



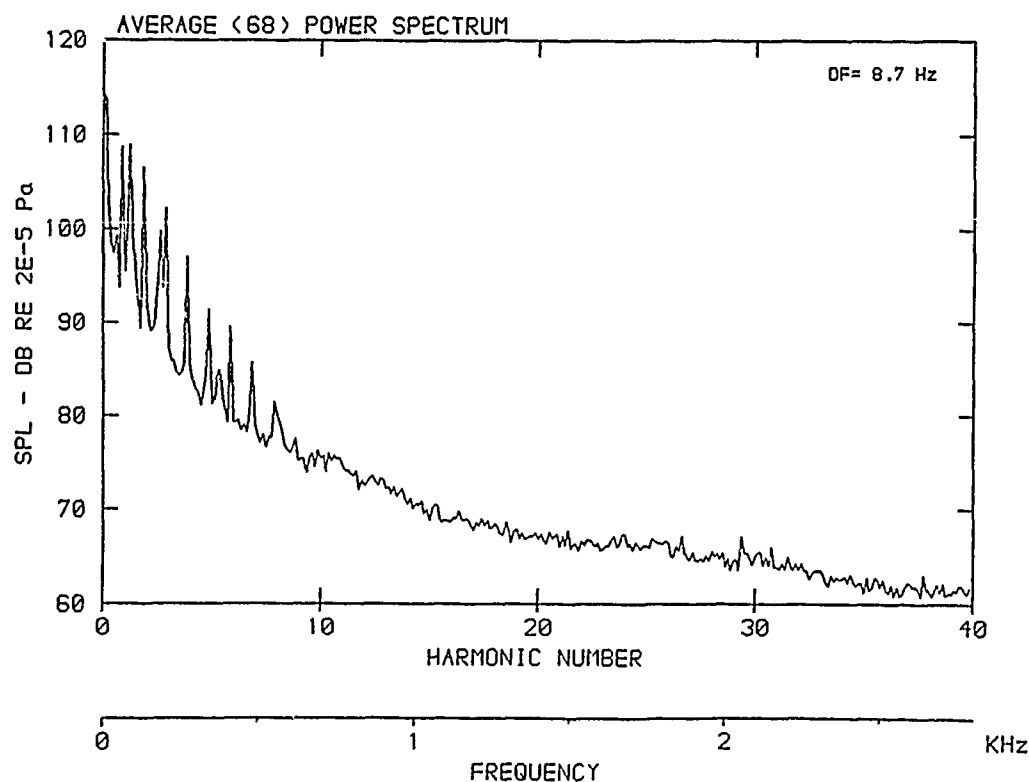
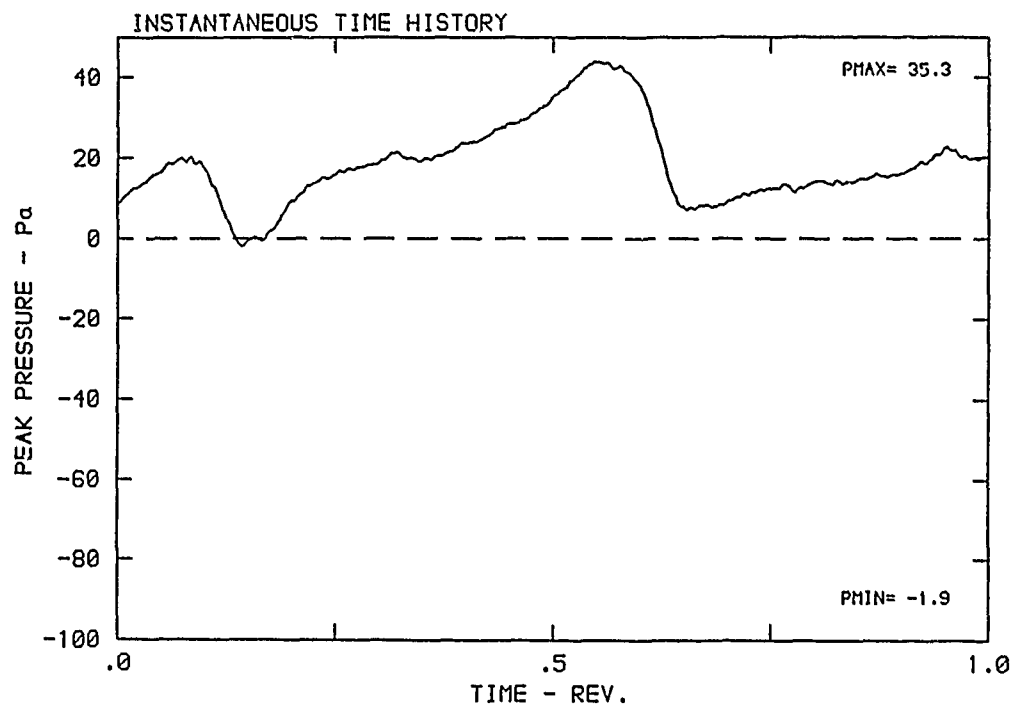
DATA POINT: CN-4    RUN: 100    MP: 7

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 286.6 K



DATA POINT: CN-4 RUN: 100 MP: 8

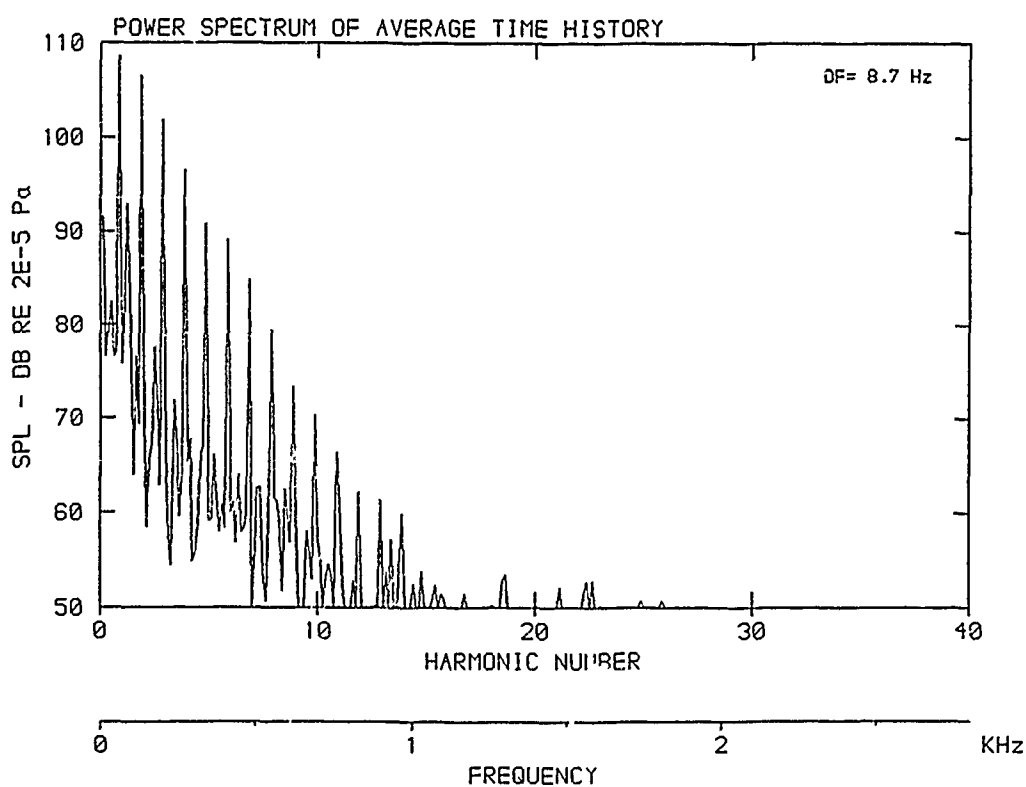
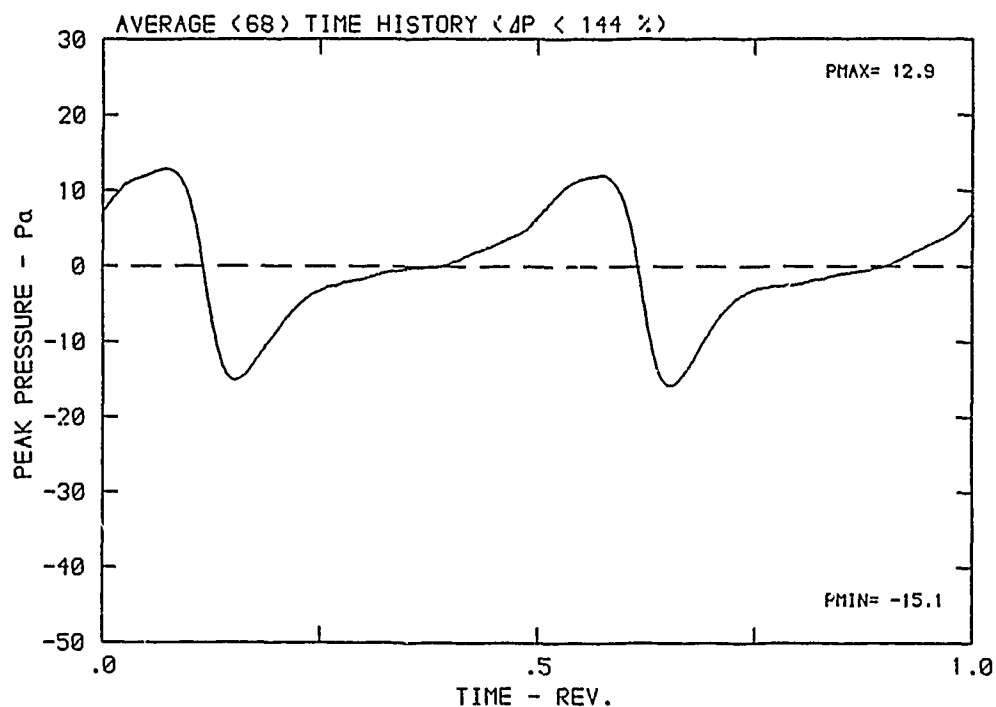
$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K





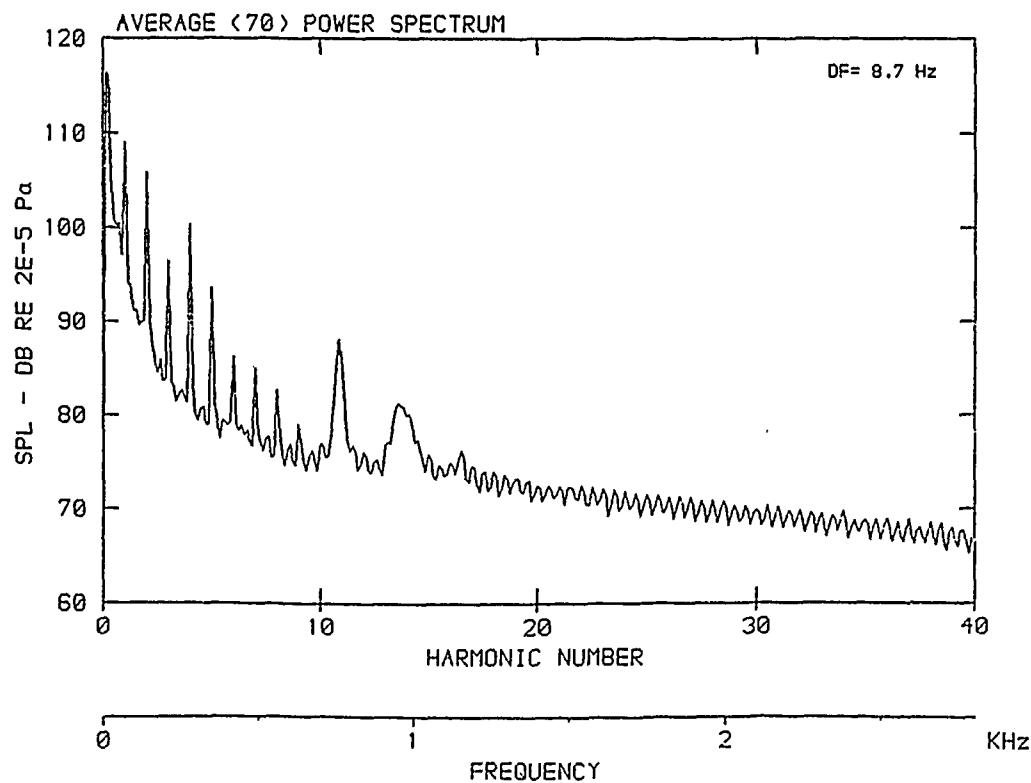
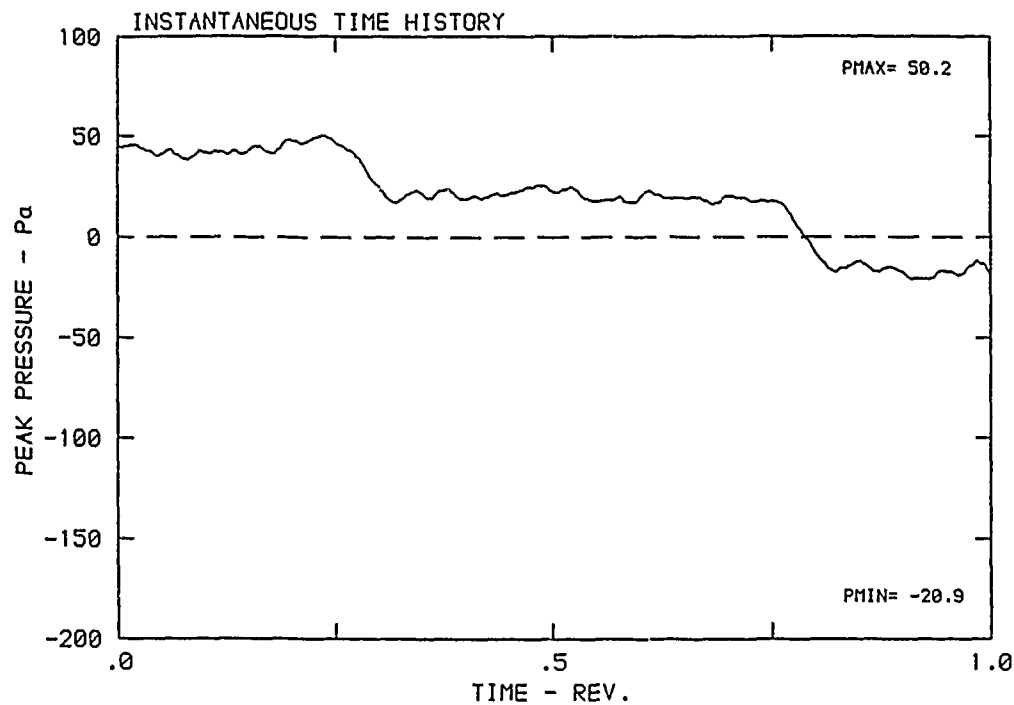
DATA POINT: CN-4 RUN: 100 MP: 8

$\beta$ : 23.7° MH: .6753 n: 2100 rpm v/u: .229  $\phi$ : .0° T: 286.6 K



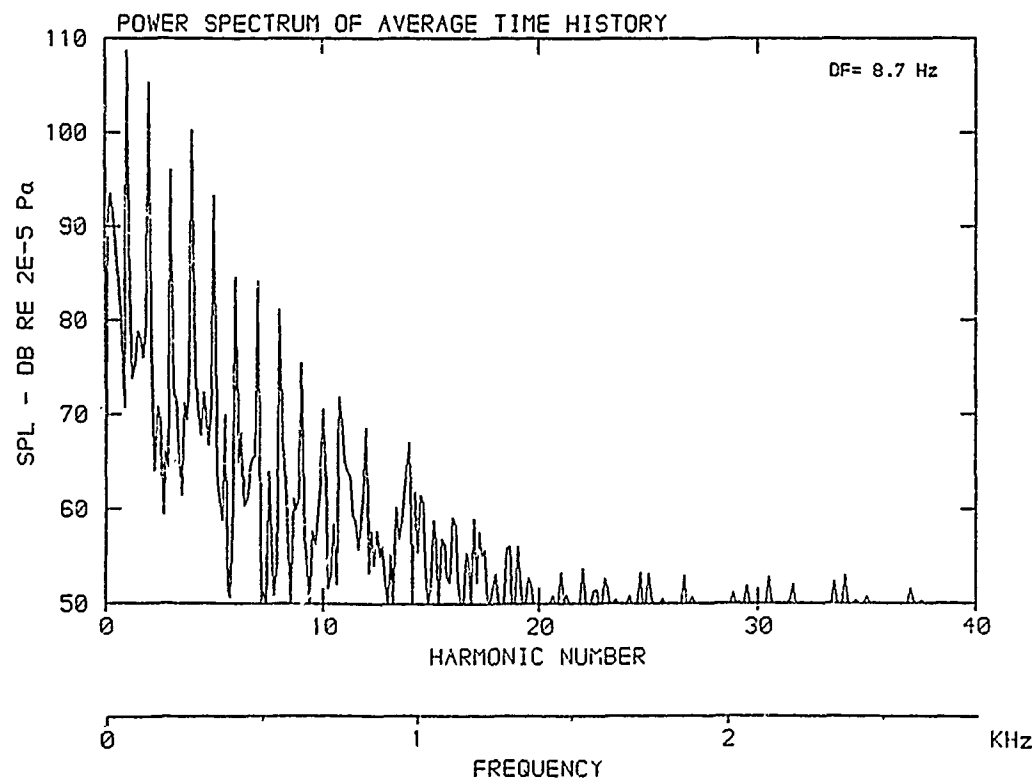
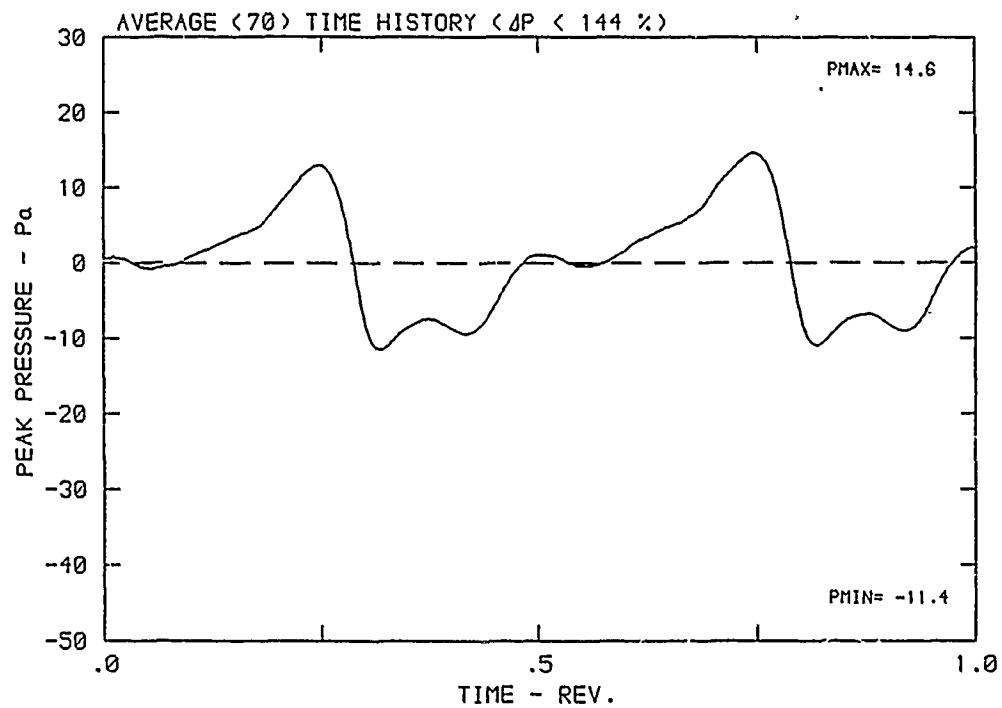
DATA POINT: CN-4    RUN: 100    MP: 9

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 286.6 K



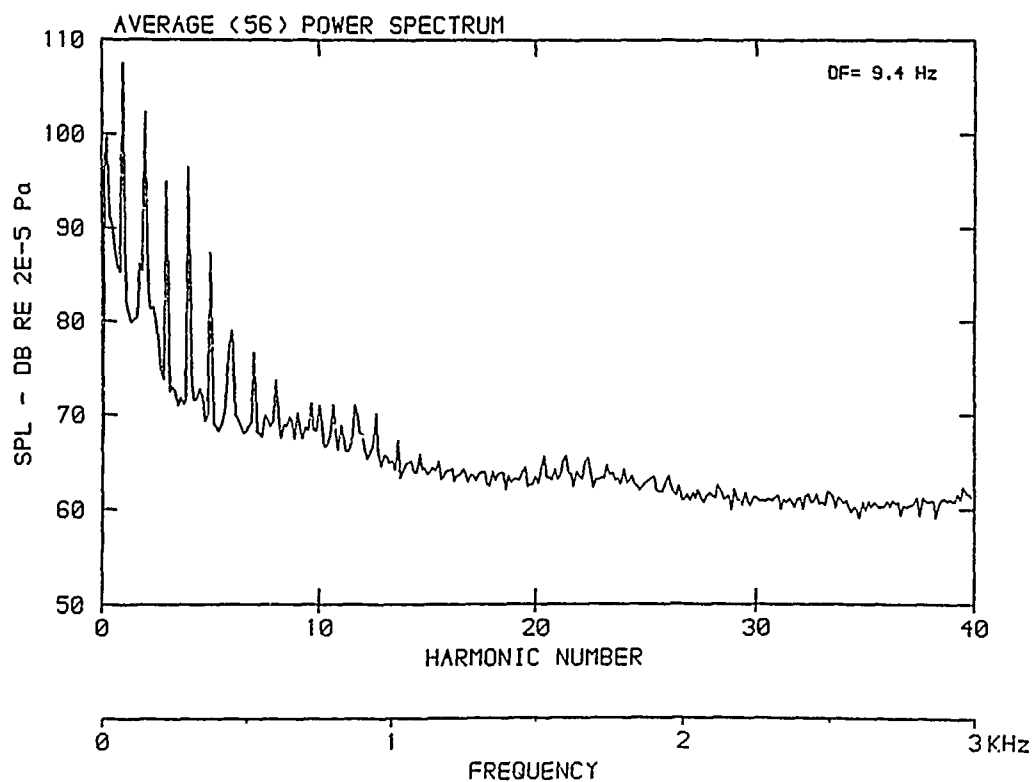
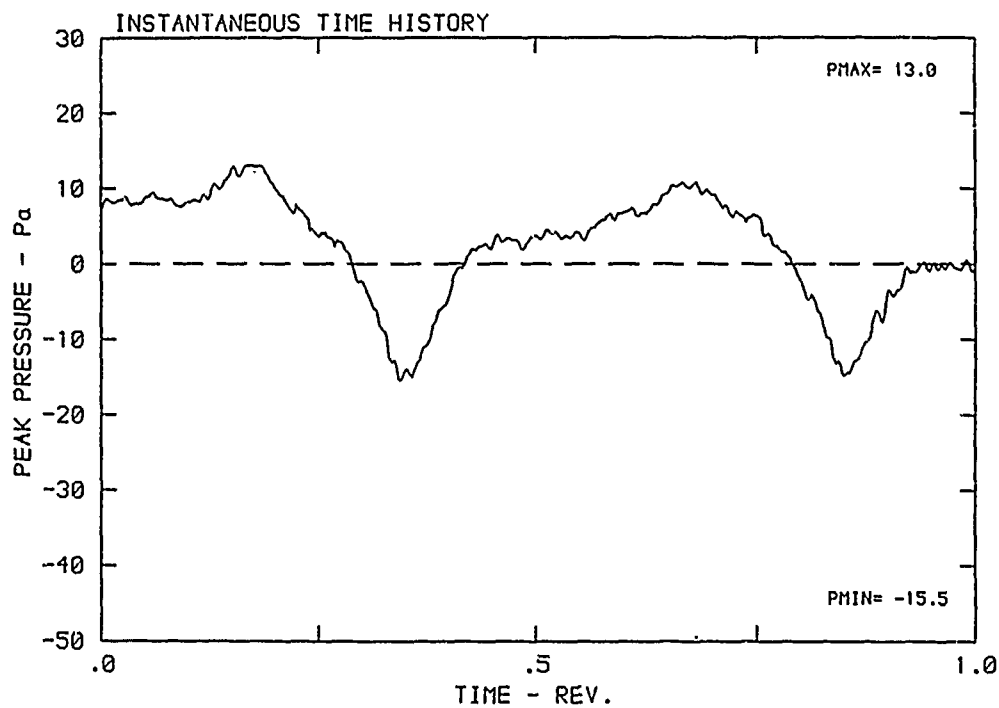
DATA POINT: CN-4    RUN: 100    MP: 9

$\beta$ : 23.7°    MH: .6753    n: 2100 rpm    v/u: .229     $\phi$ : .0°    T: 286.6 K



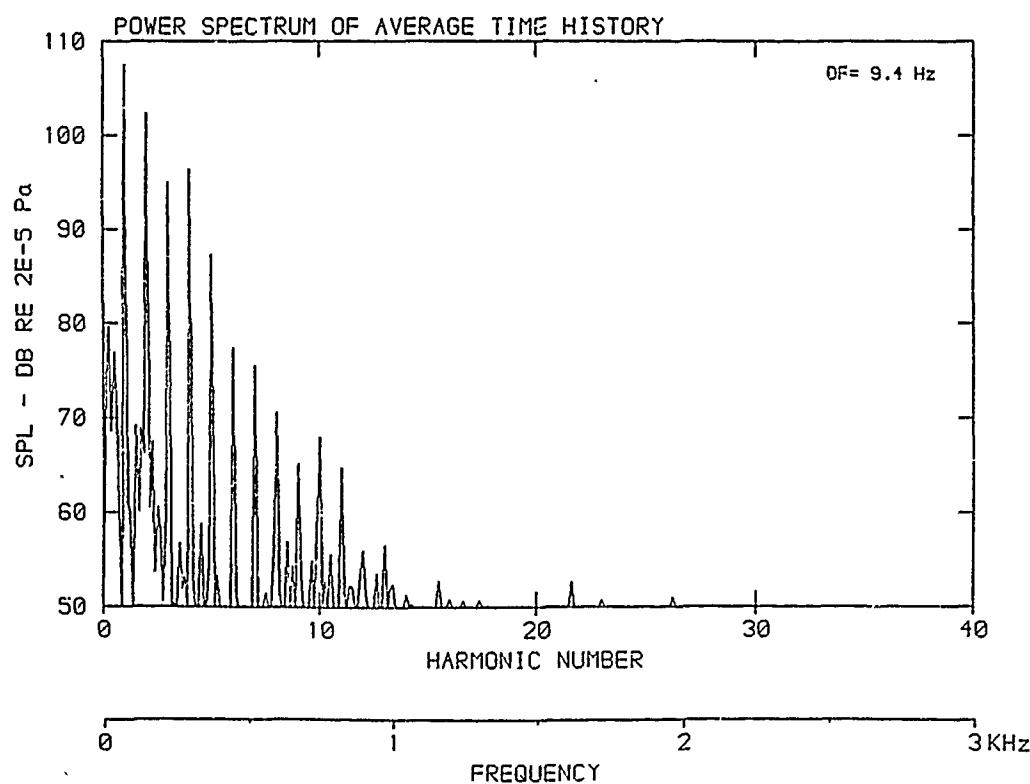
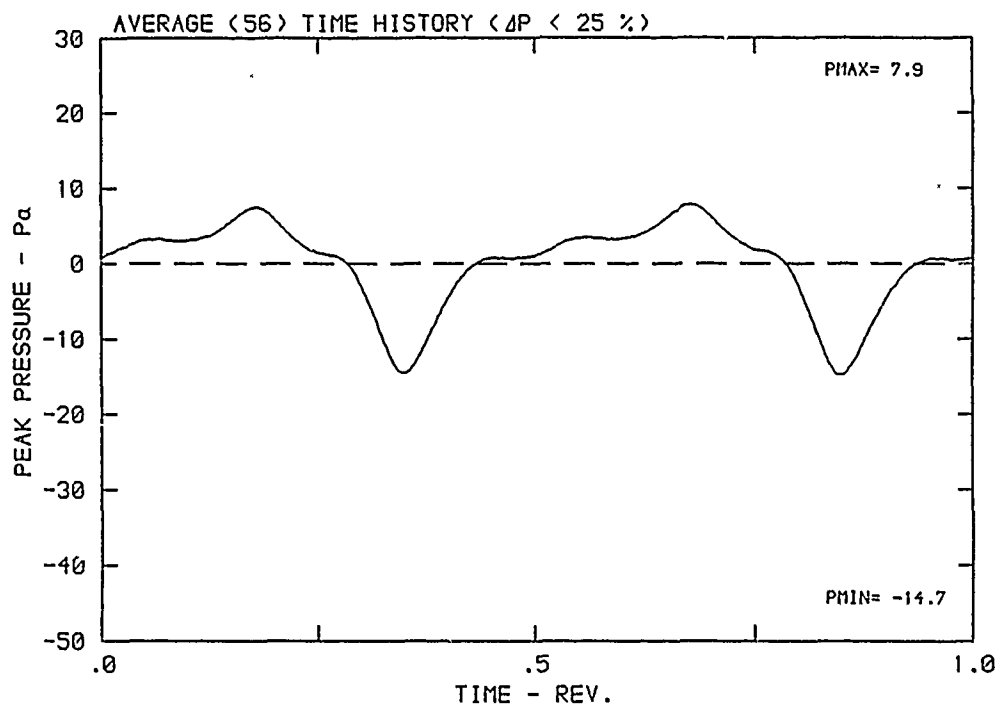
DATA POINT: CN-7    RUN: 99    MP: 1

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



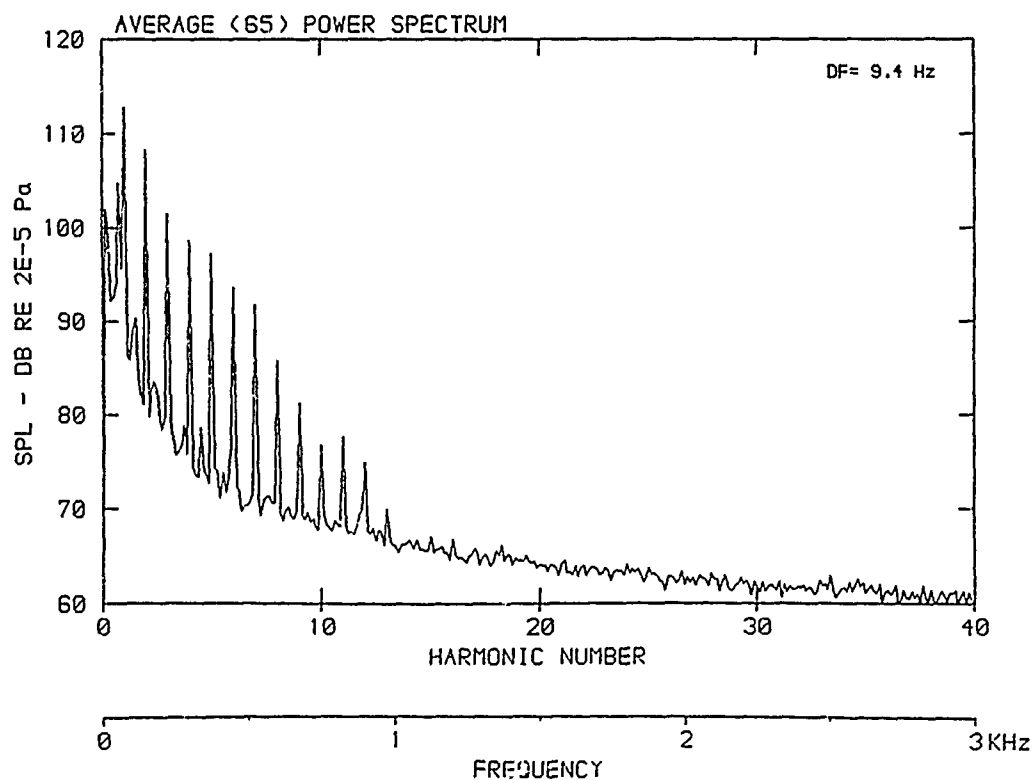
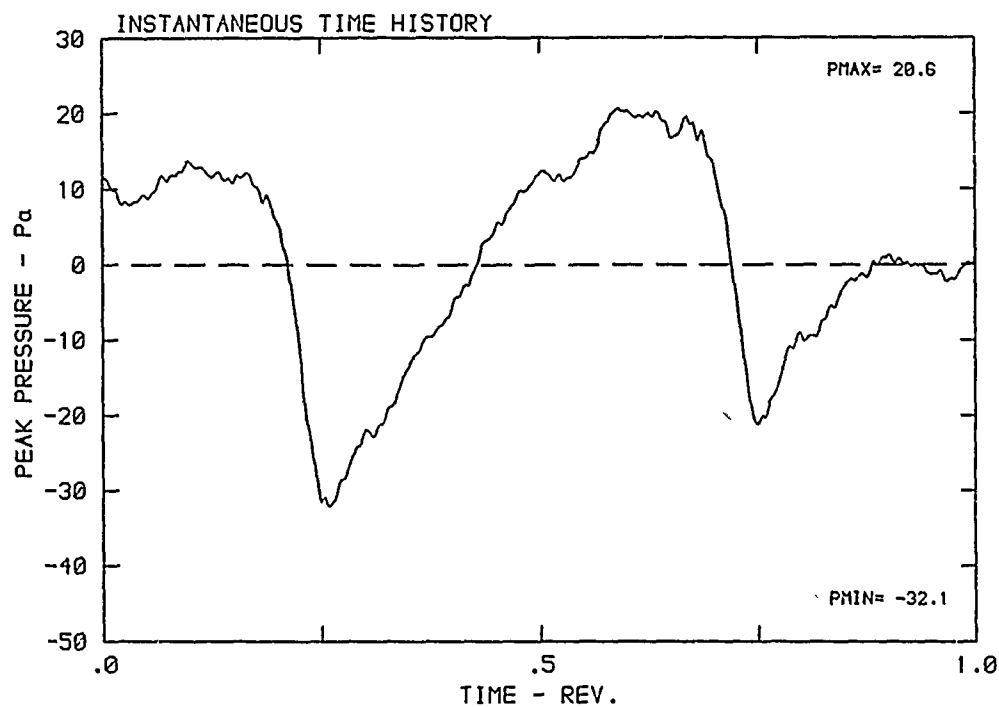
DATA POINT: CN-7      RUN: 99      MP: 1

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



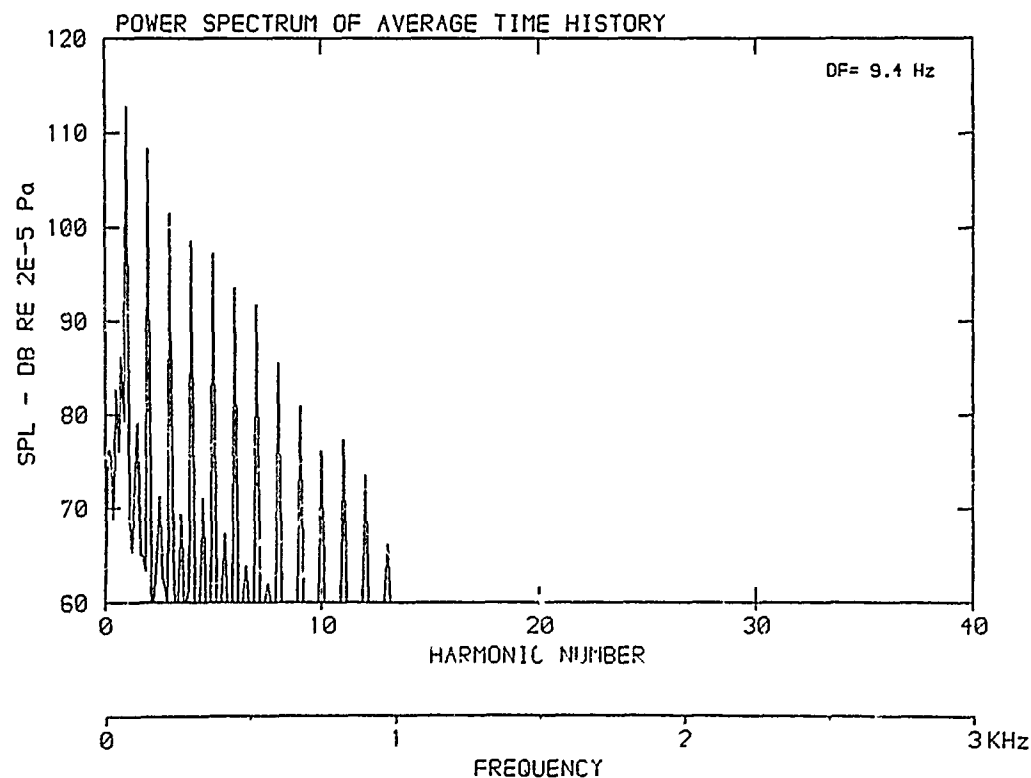
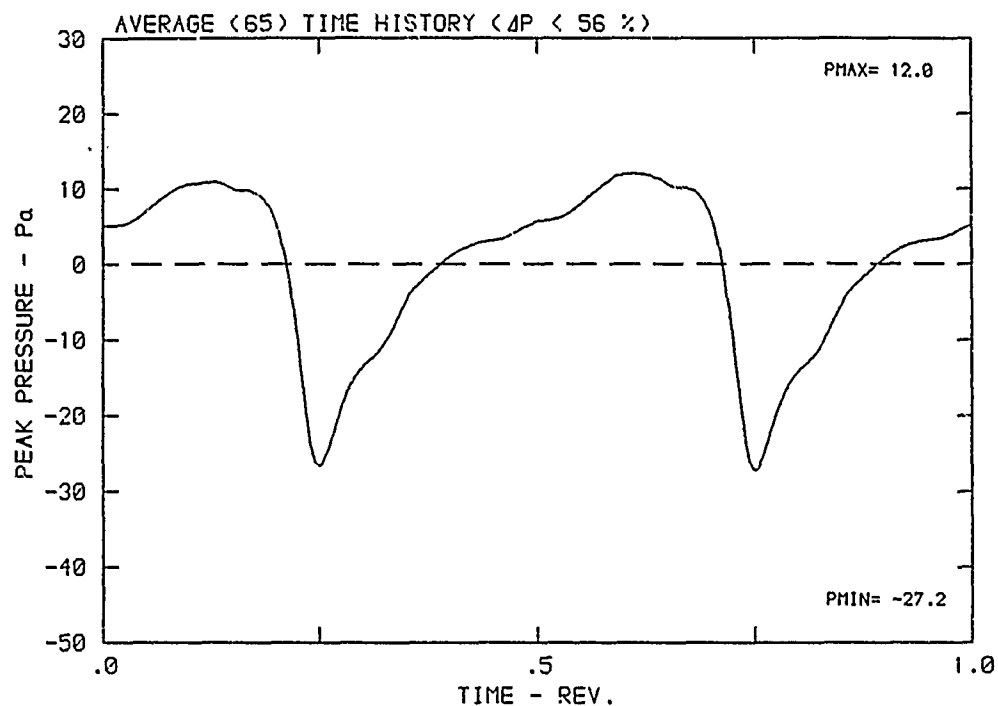
DATA POINT: CN-7      RUN: 99      MP: 2

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



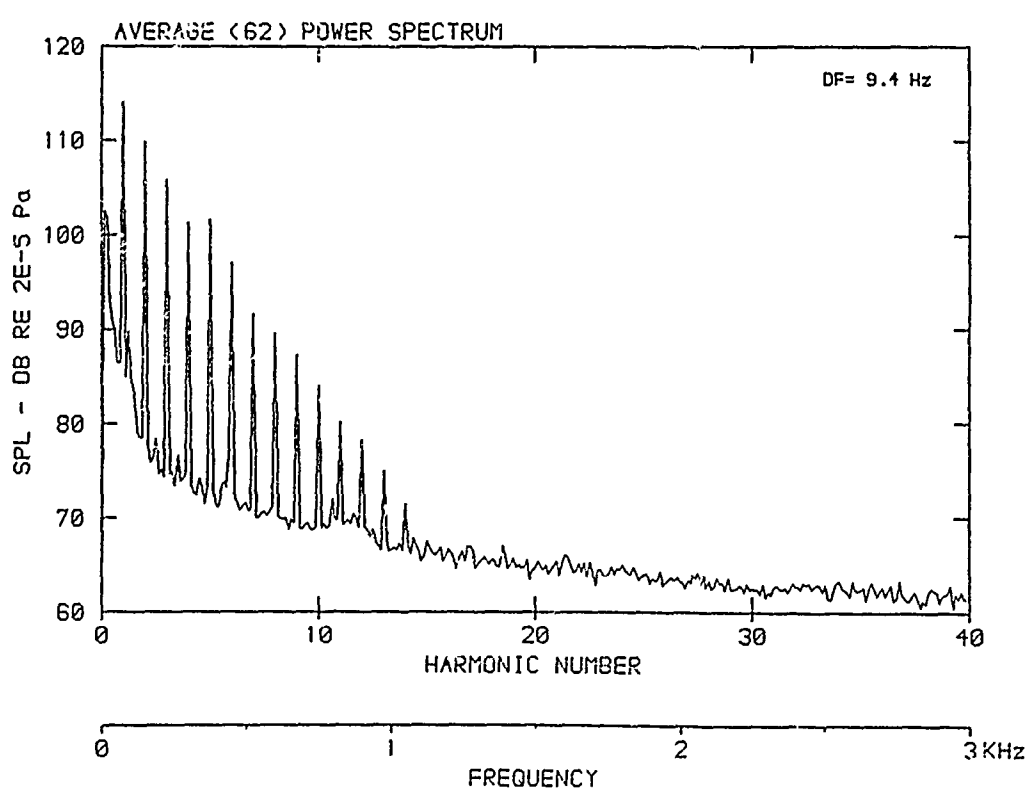
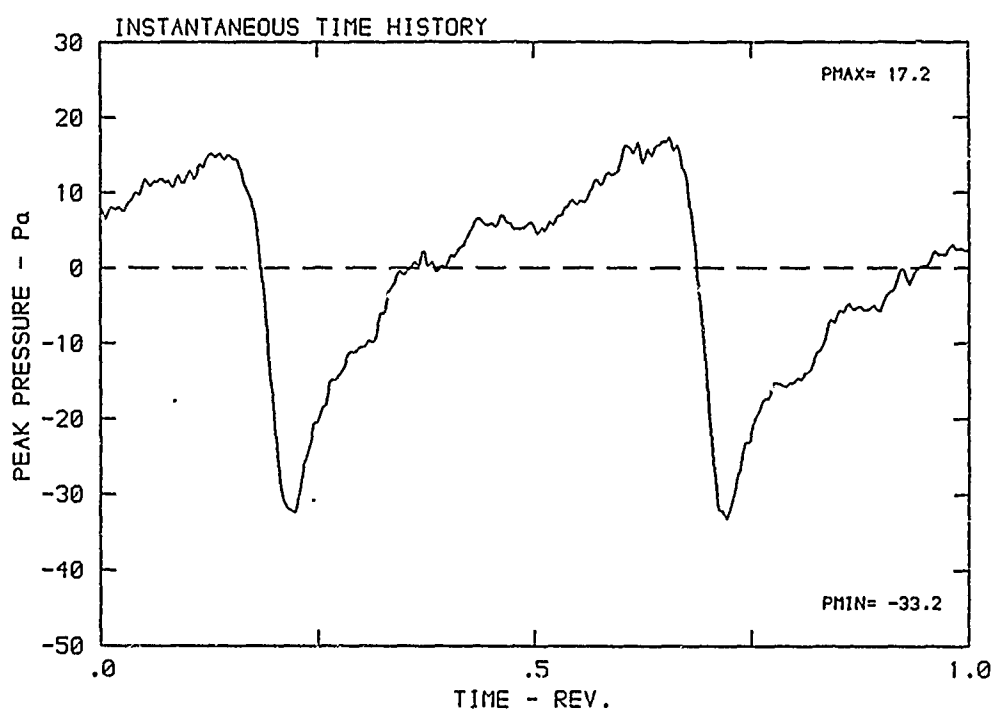
DATA POINT: CN-7    RUN: 99    MP: 2

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



DATA POINT: CN-7      RUN: 99      MP: 3

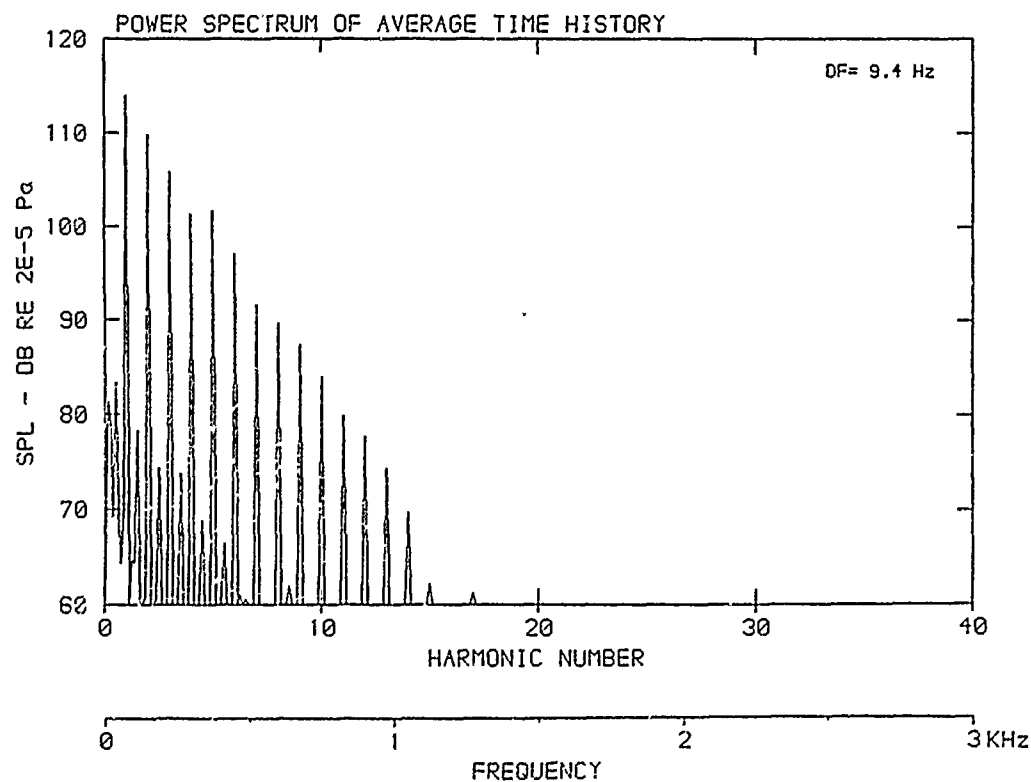
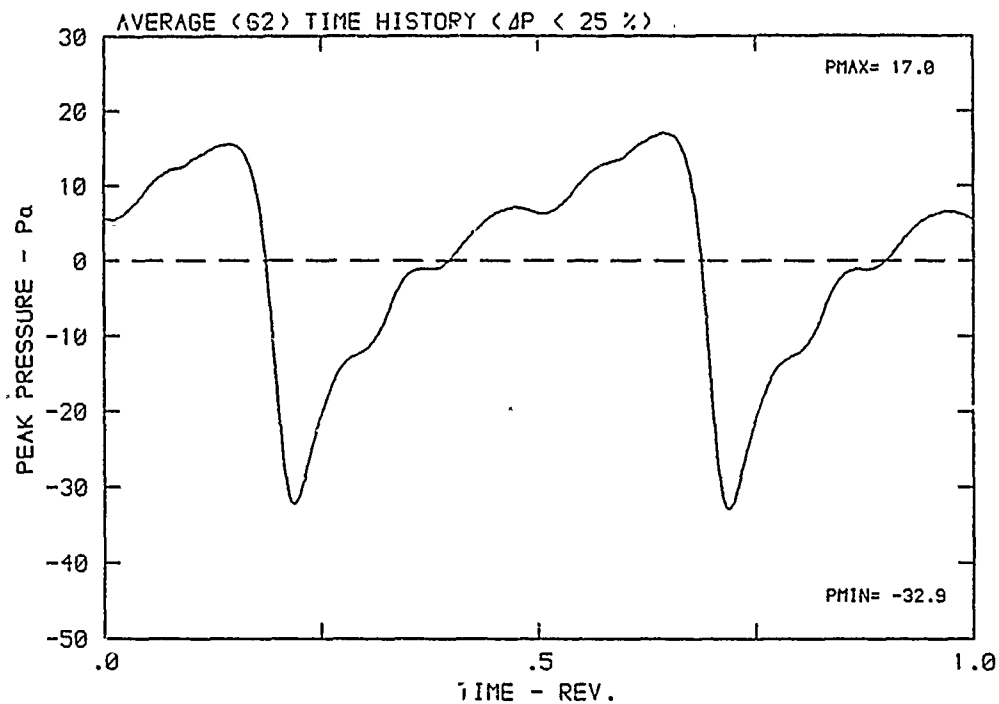
$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K





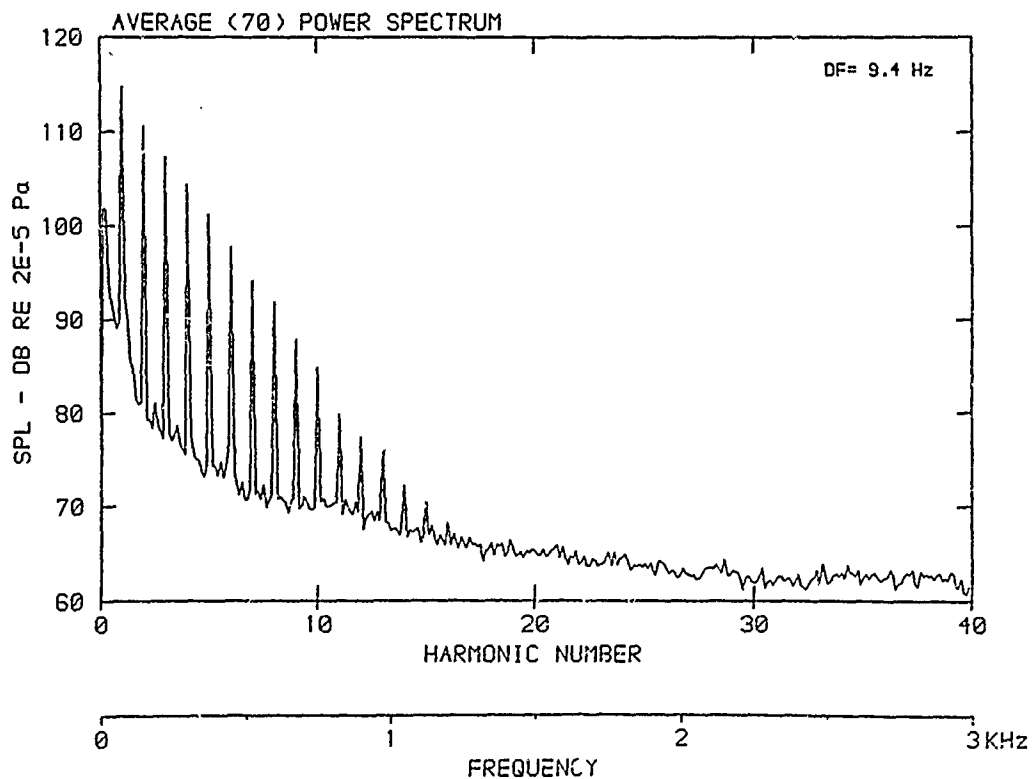
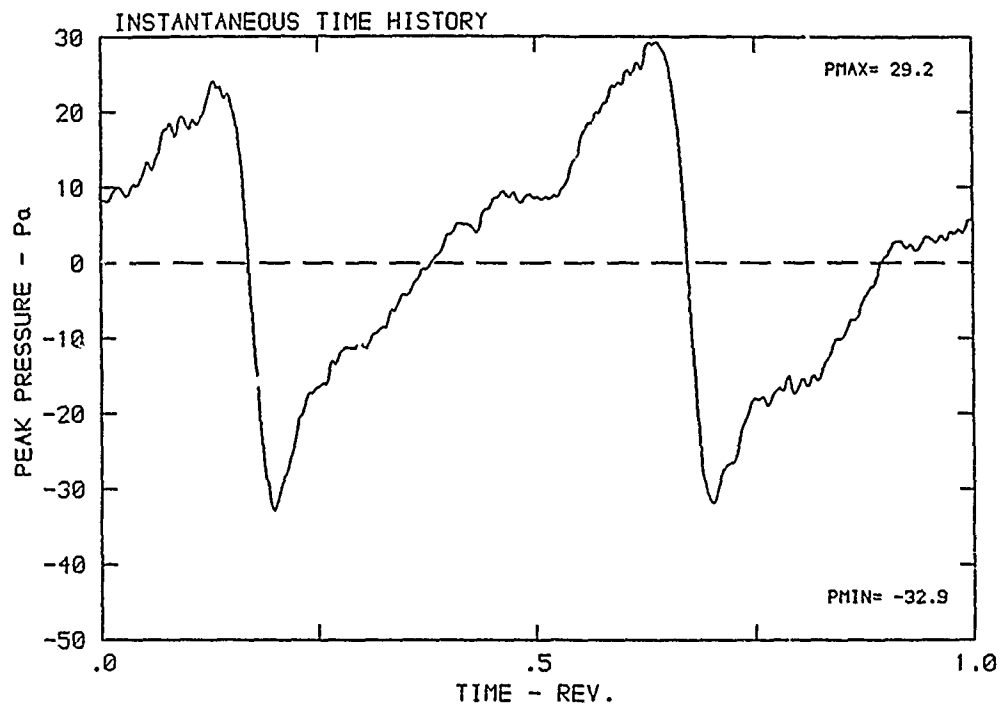
DATA POINT: CN-7    RUN: 99    MP: 3

$\beta$ : 23.7°    MH: .7204     $\gamma$ : 2250 rpm     $v/u$ : .214     $\phi$ : .0°    T: 287.3 K



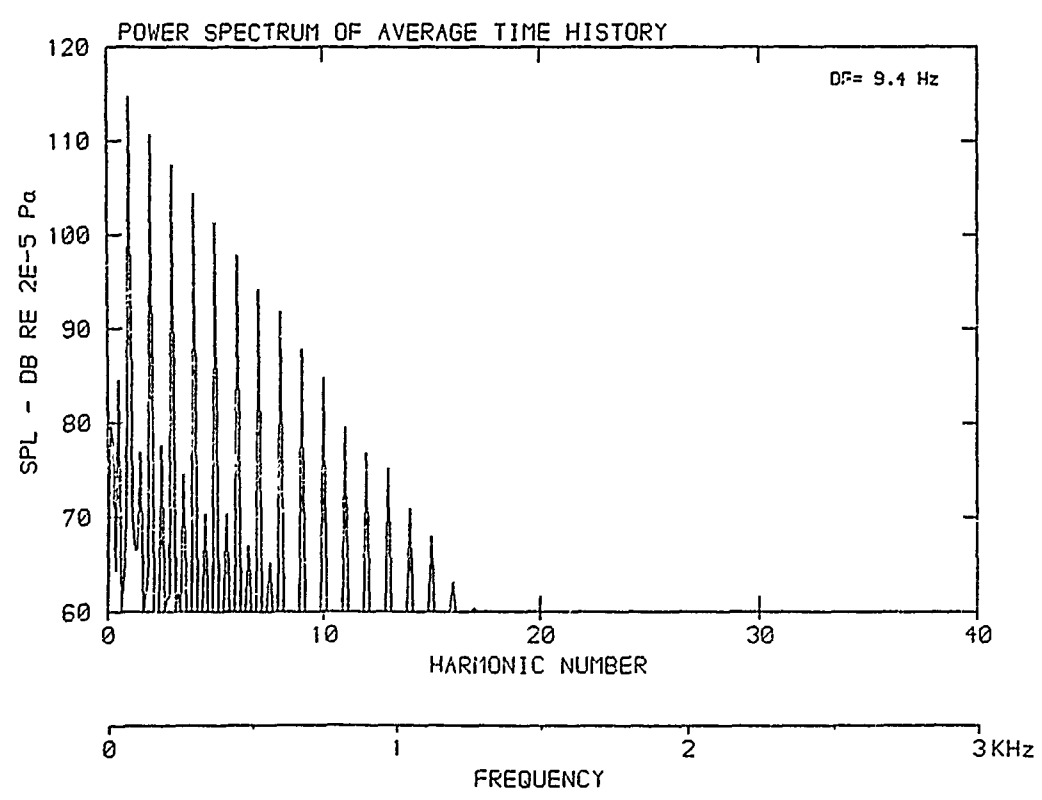
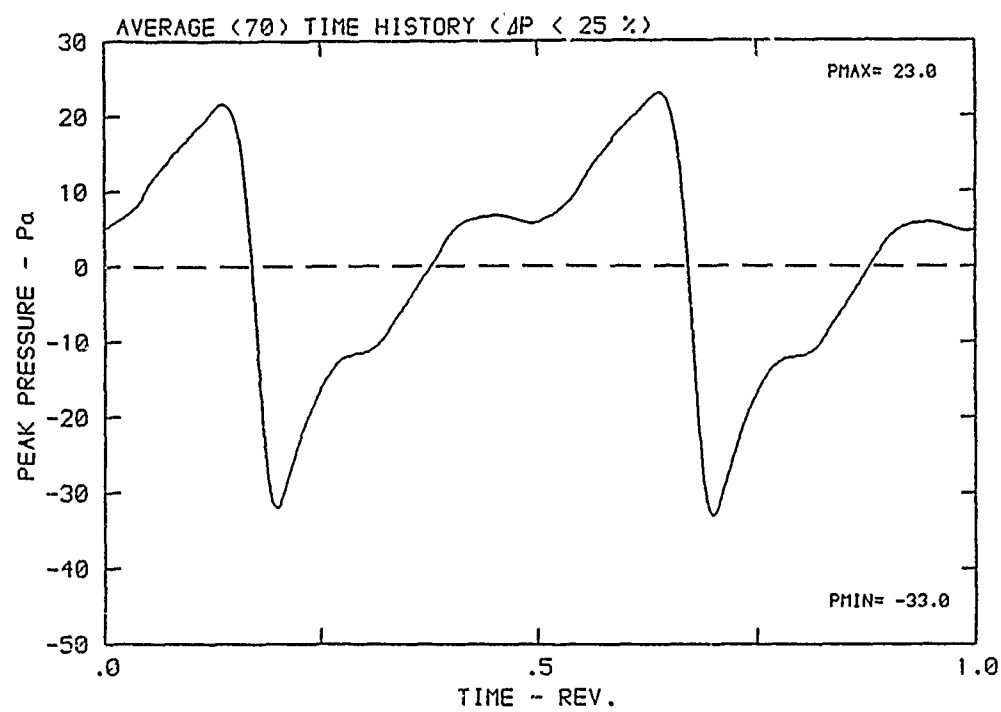
DATA POINT: CN-7      RUN: 99      MP: 4

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



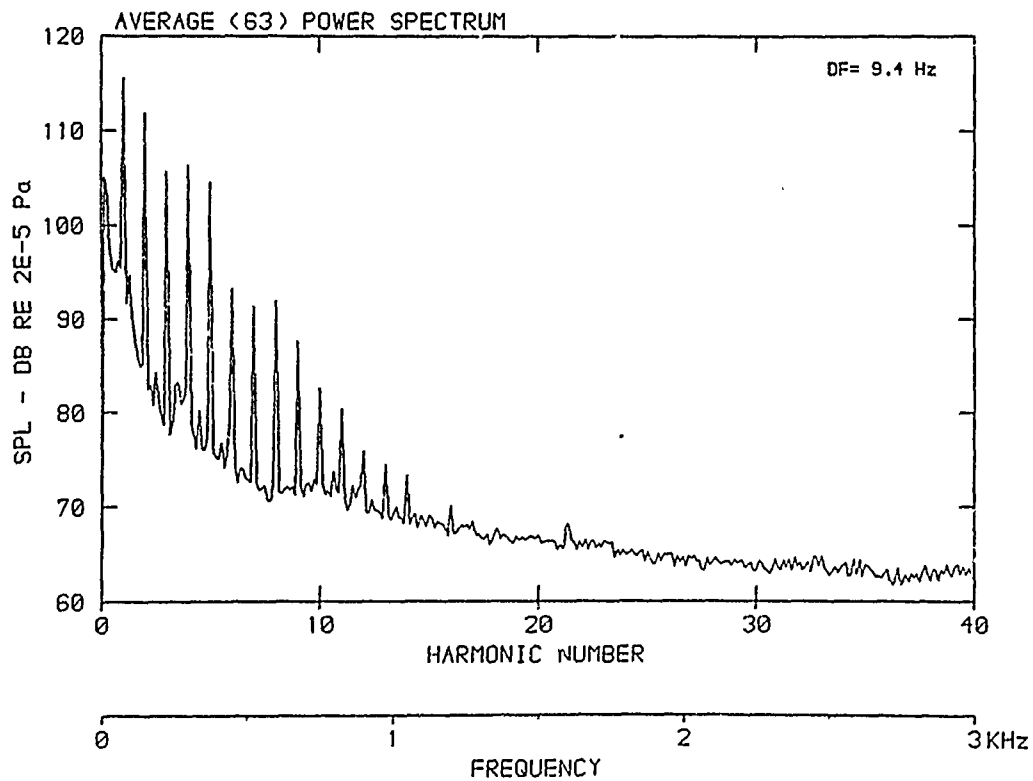
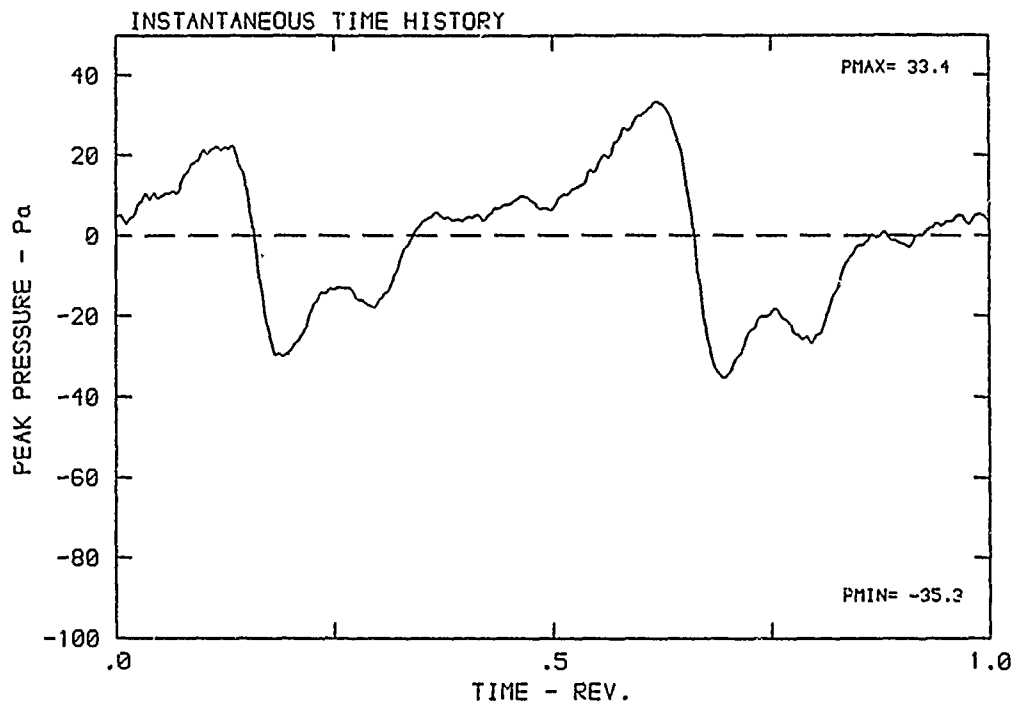
DATA POINT: CN-7      RUN: 99      MP: 4

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



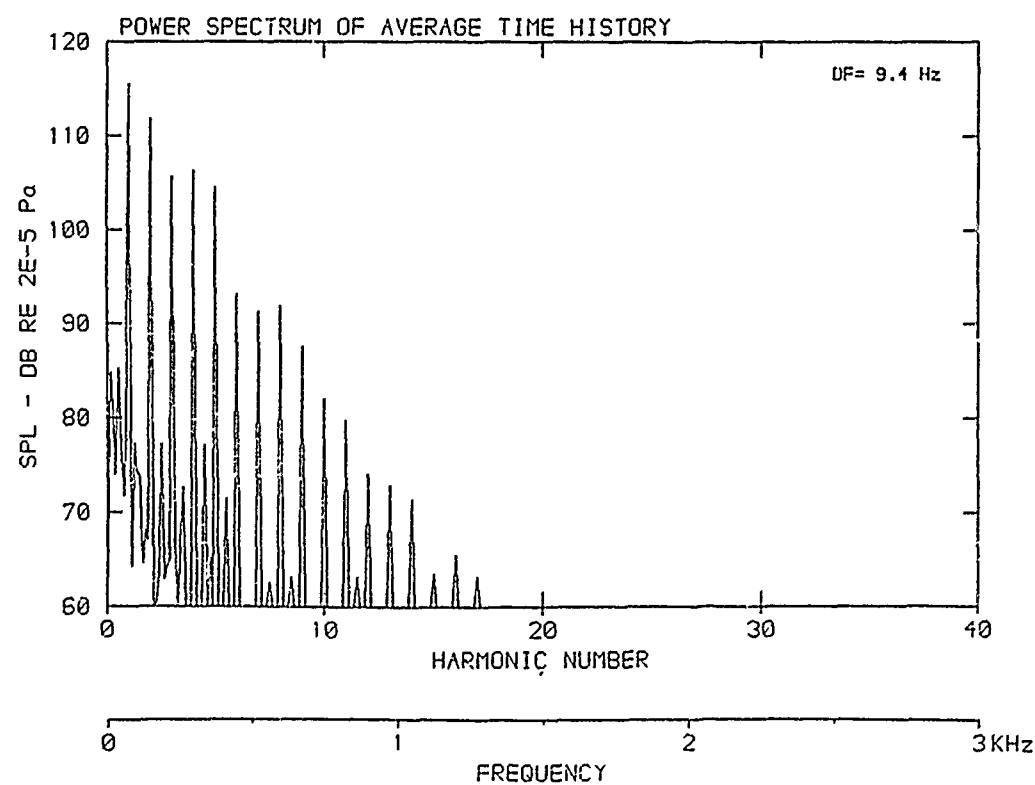
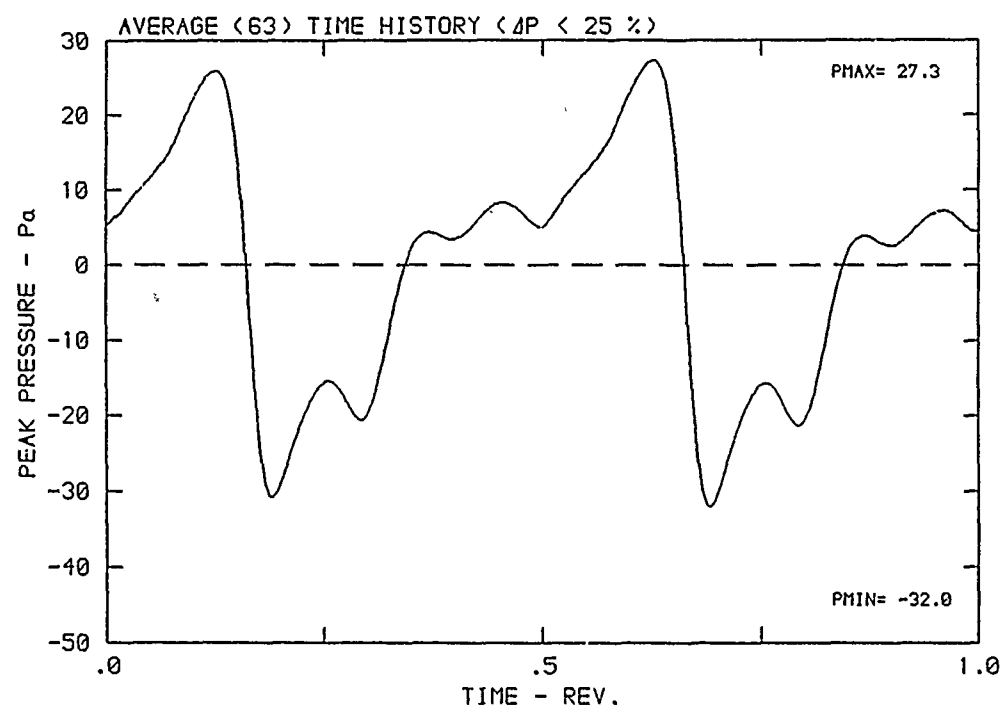
DATA POINT: CN-7    RUN: 99    MP: 5

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm     $v/u$ : .214     $\phi$ : .0°    T: 287.3 K



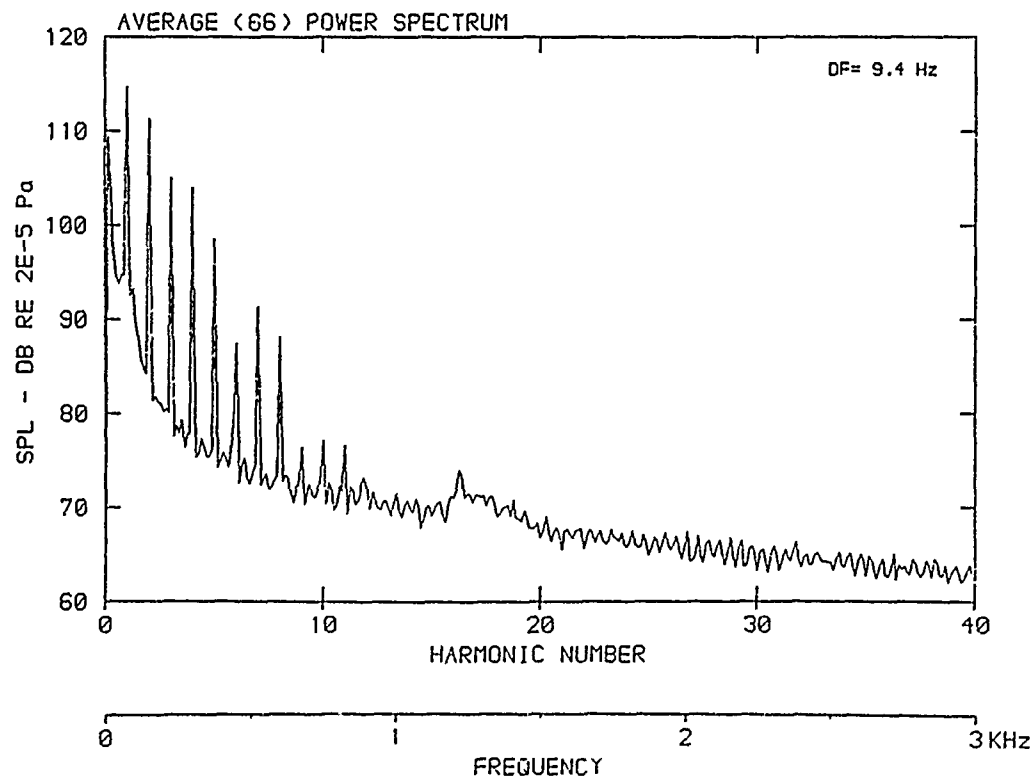
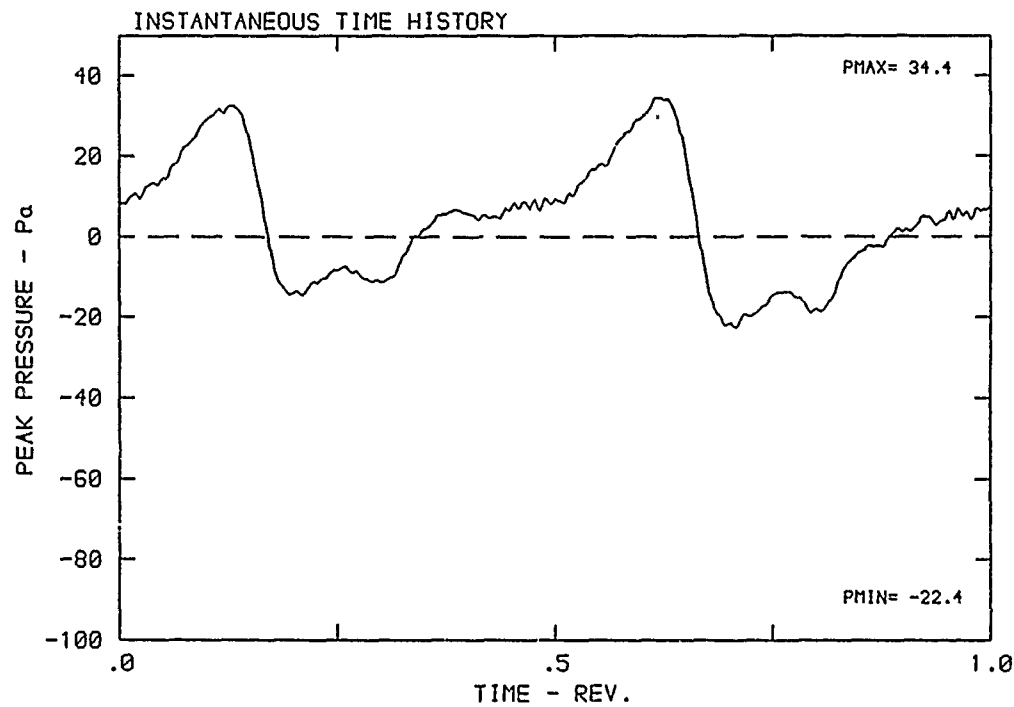
DATA POINT: CN-7    RUN: 99    MP: 5

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



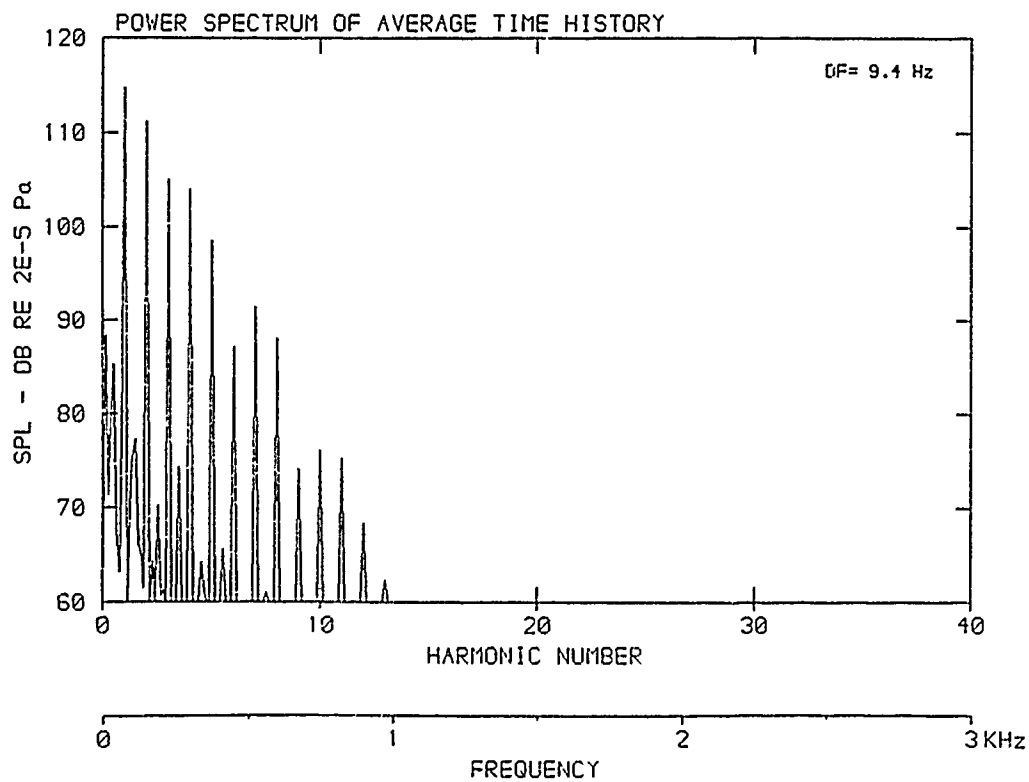
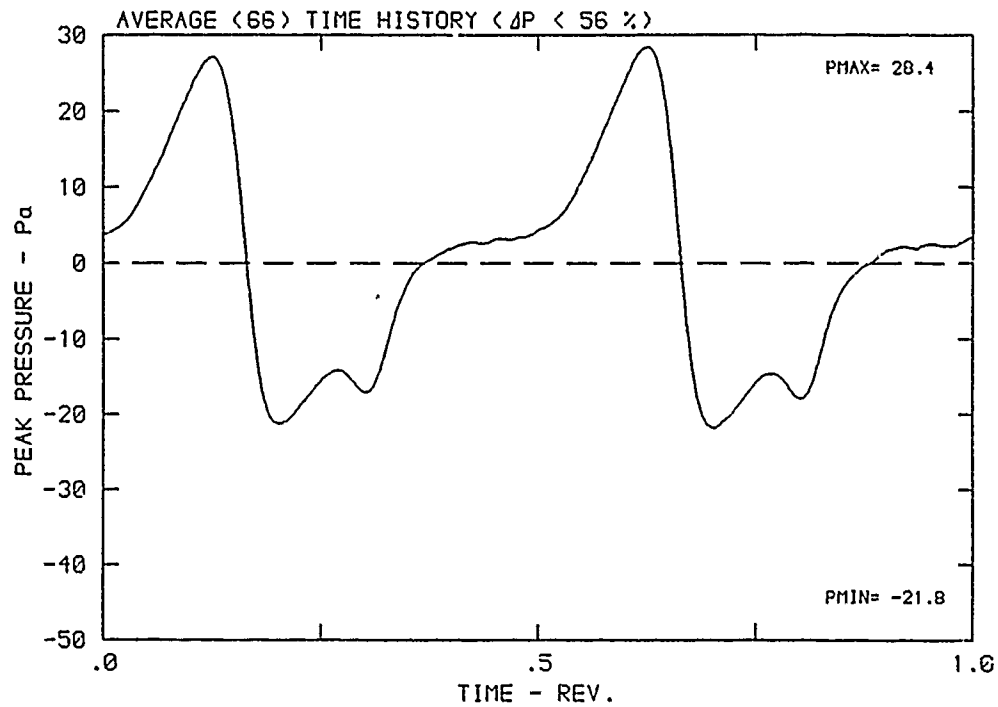
DATA POINT: CN-7      RUN: 99      MP: 6

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



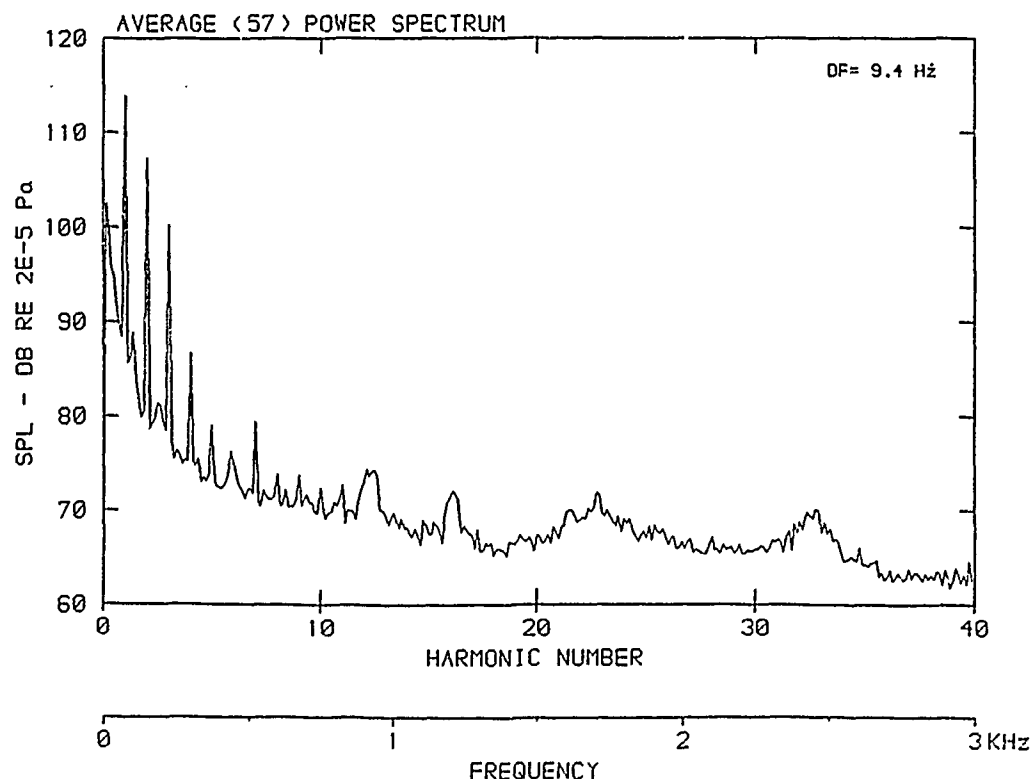
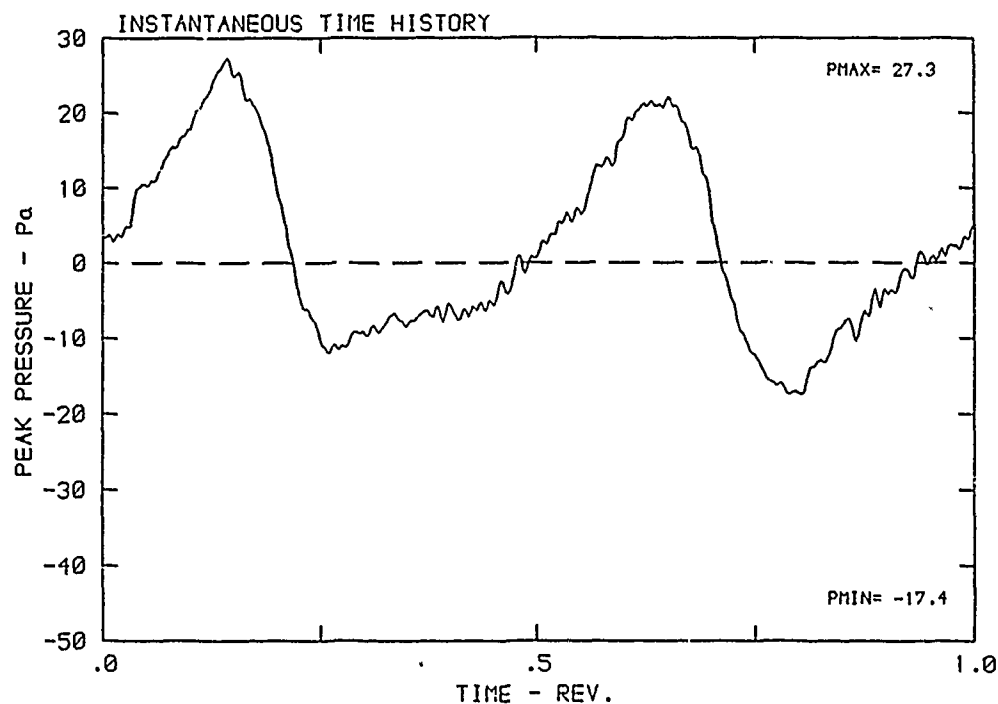
DATA POINT: CN-7      RUN: 99      MP: 6

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



DATA POINT: CN-7 RUN: 99 MP: 7

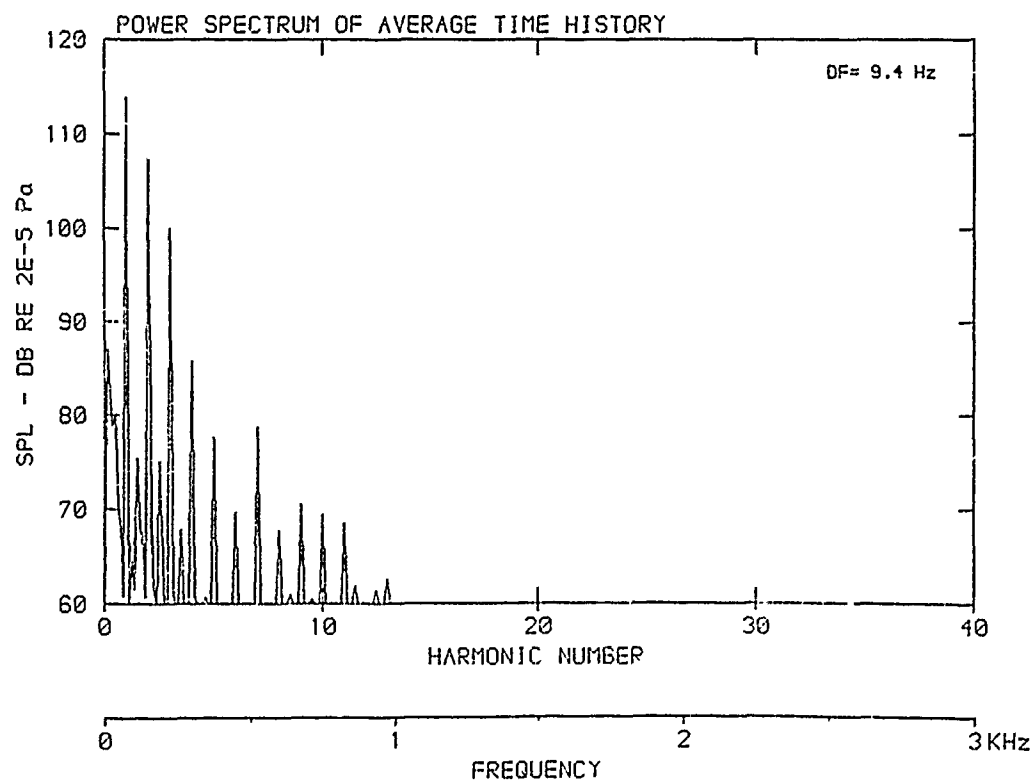
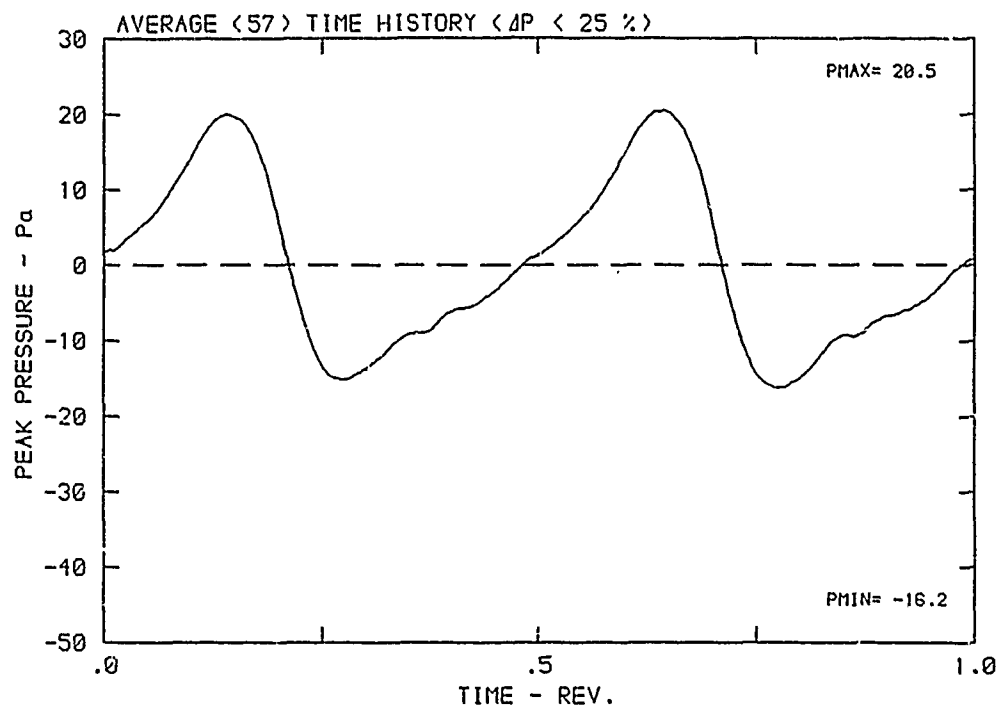
$\beta$ : 23.7° MH: .7204 n: 2250 rpm v/u: .214  $\phi$ : .0° T: 287.3 K





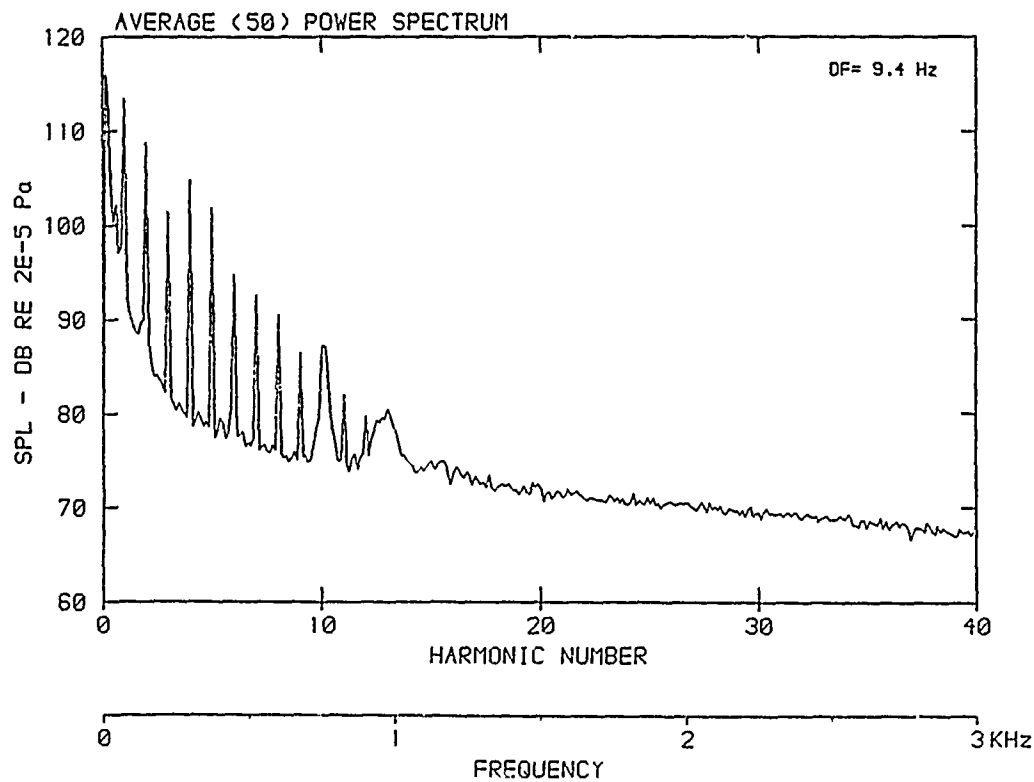
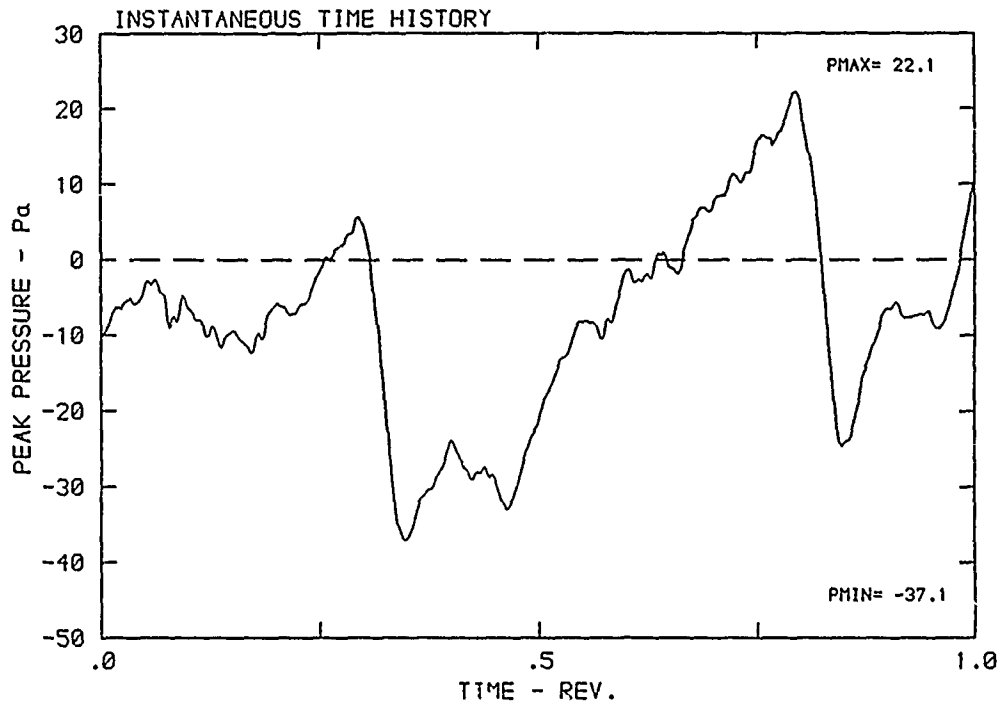
DATA POINT: CN-7      RUN: 99      MP: 7

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



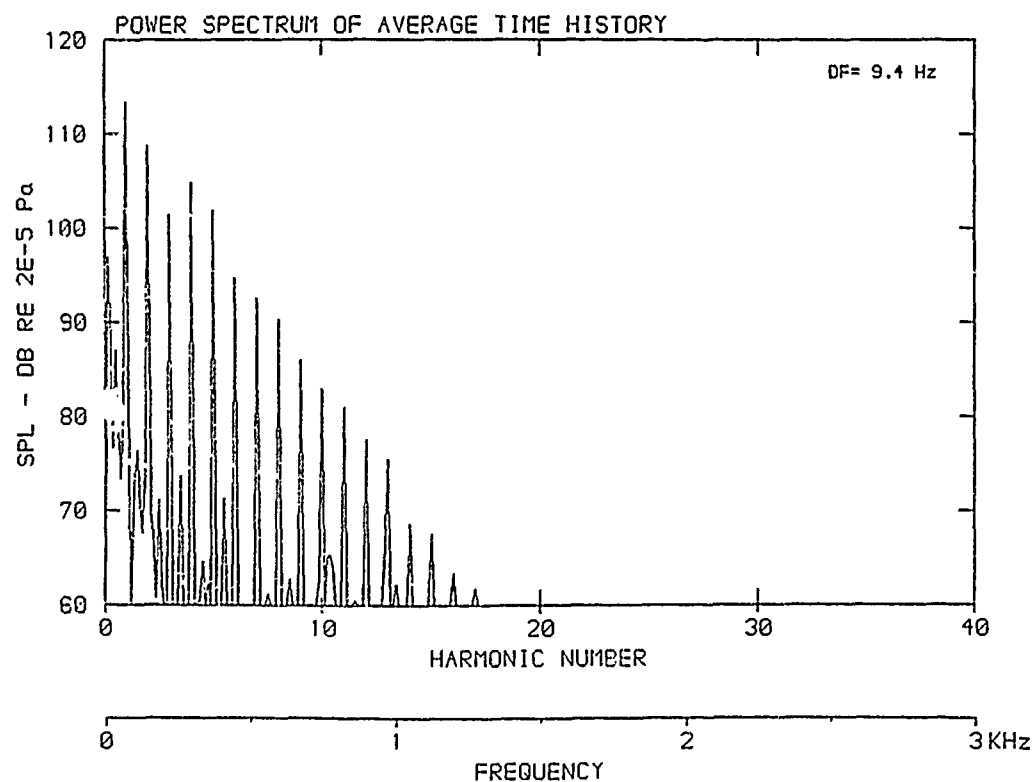
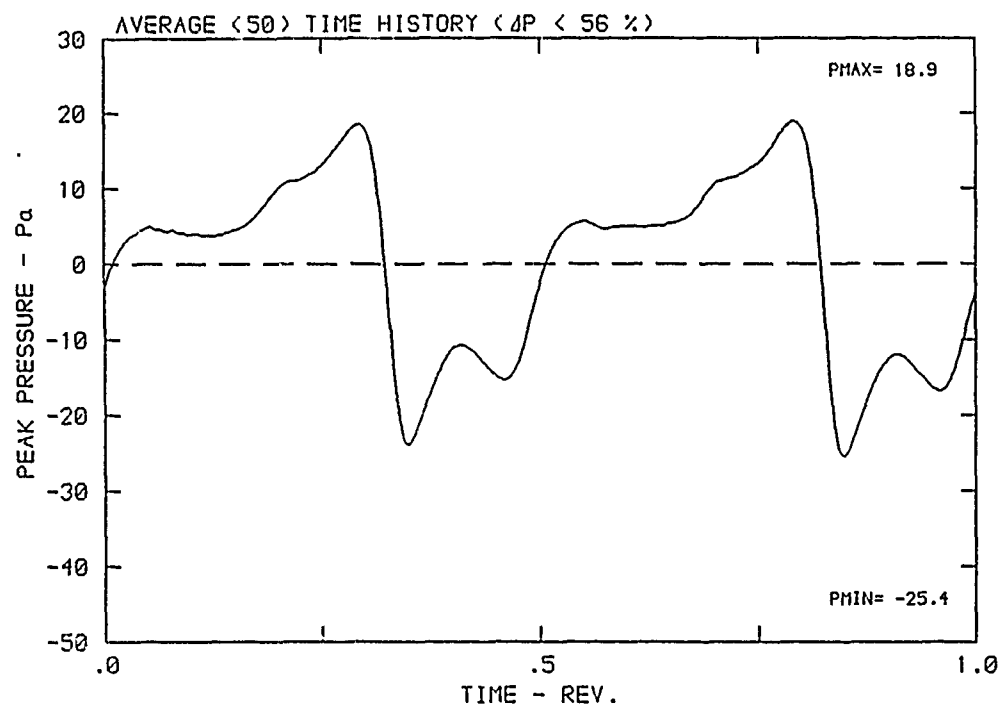
DATA POINT: CN-7      RUN: 99      MP: 9

$\beta$ : 23.7°    MH: .7204    n: 2250 rpm    v/u: .214     $\phi$ : .0°    T: 287.3 K



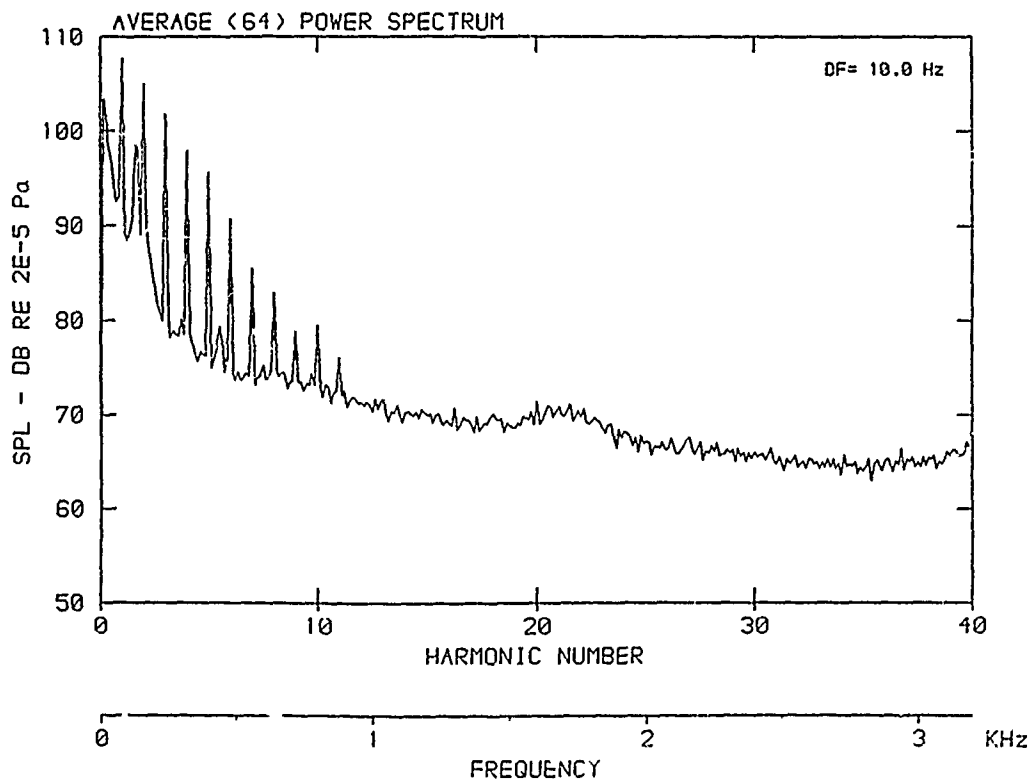
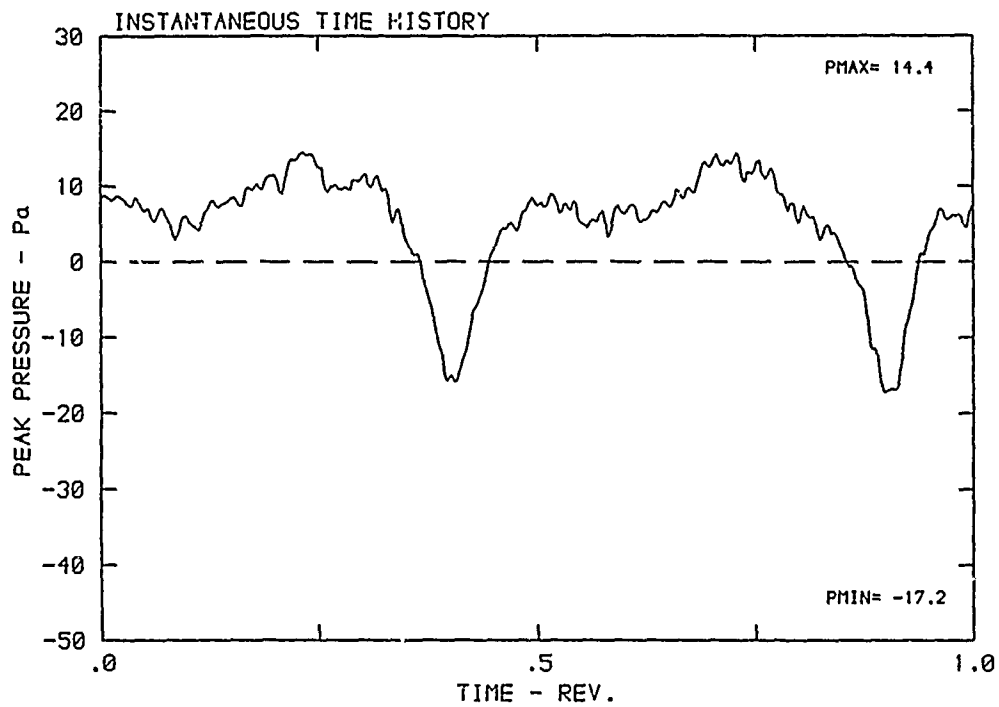
DATA POINT: CN-7 RUN: 99 MP: 9

$\beta$ : 23.7° MH: .7204 n: 2250 rpm v/u: .214  $\phi$ : .0° T: 287.3 K



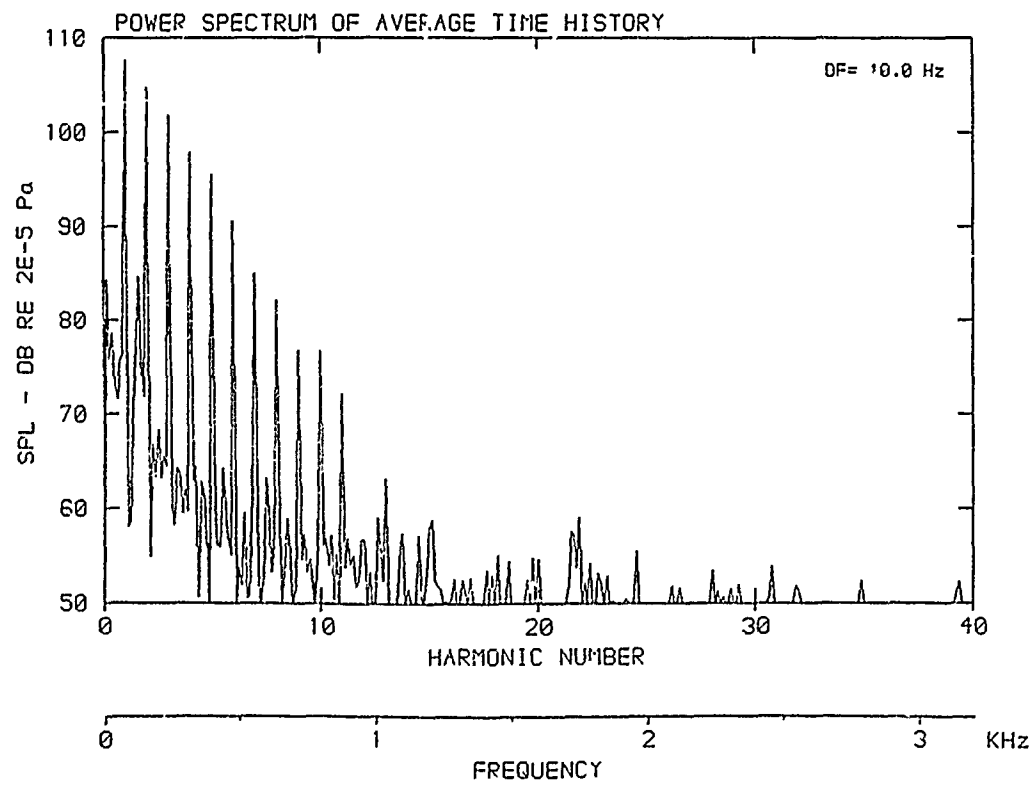
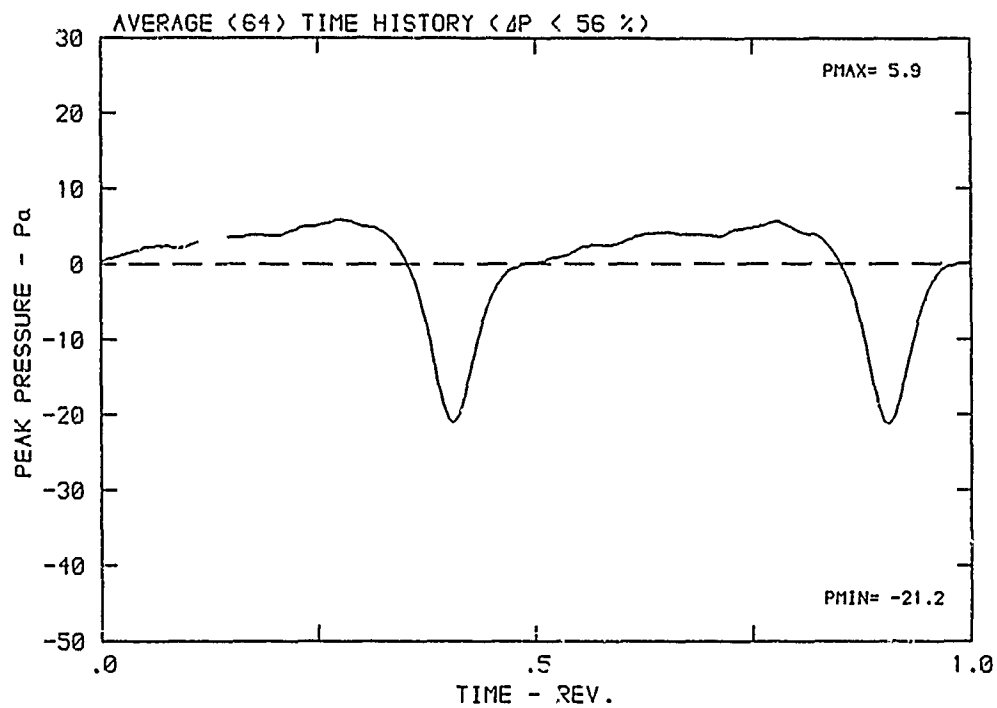
DATA POINT: CN-5 RUN: 98 MP: 1

$\beta$ : 23.7° MH: .7775 n: 2400 rpm v/u: .264  $\phi$ : .0° T: 287.0 K



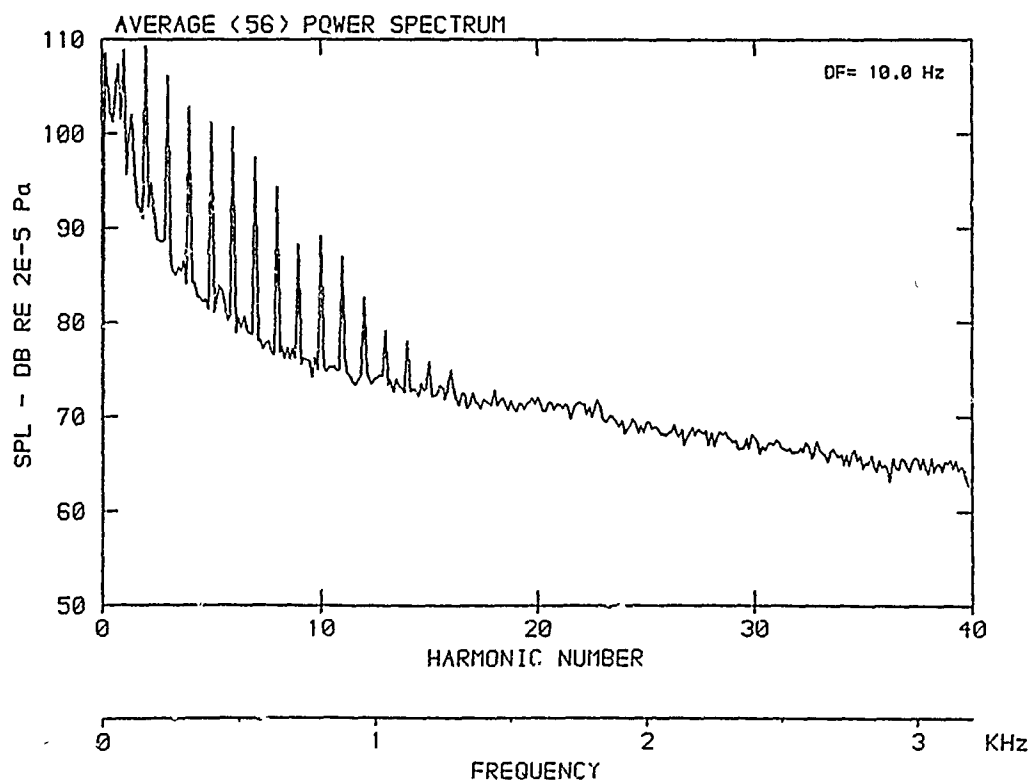
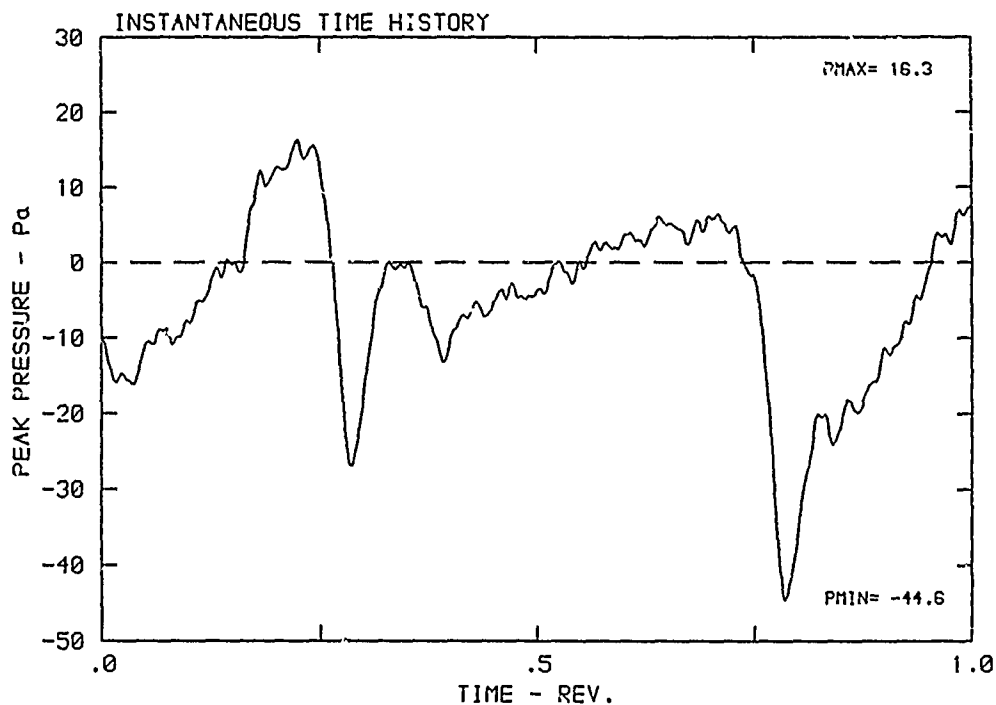
DATA POINT: CN-5    RUN: 98    MP: 1

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



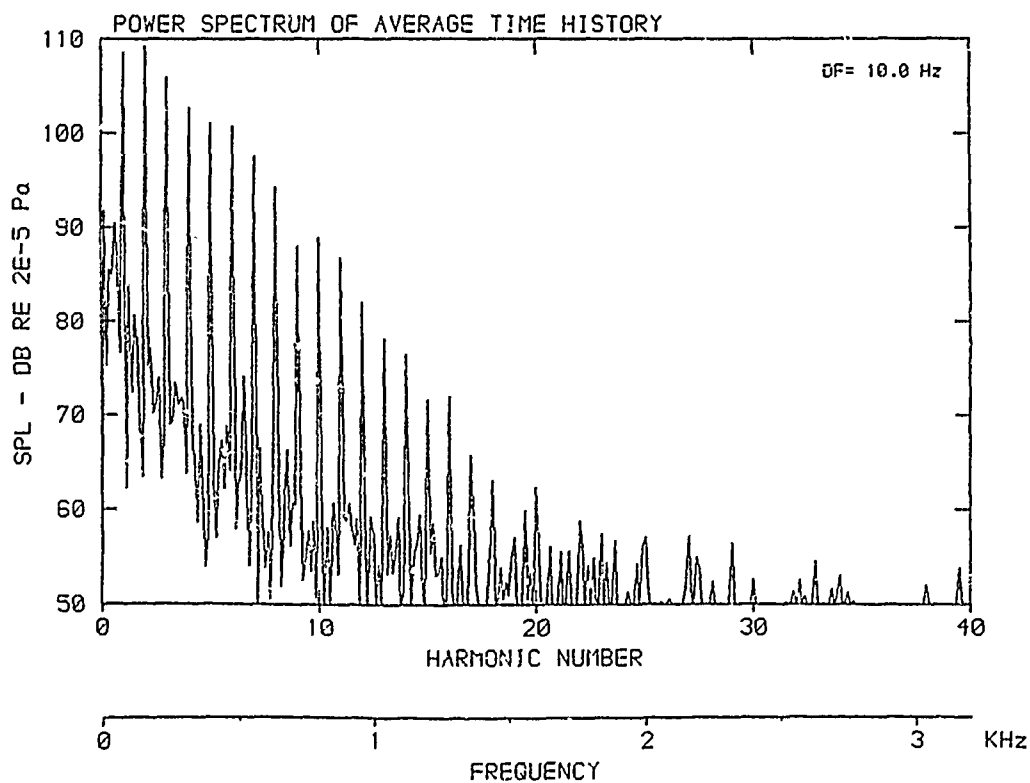
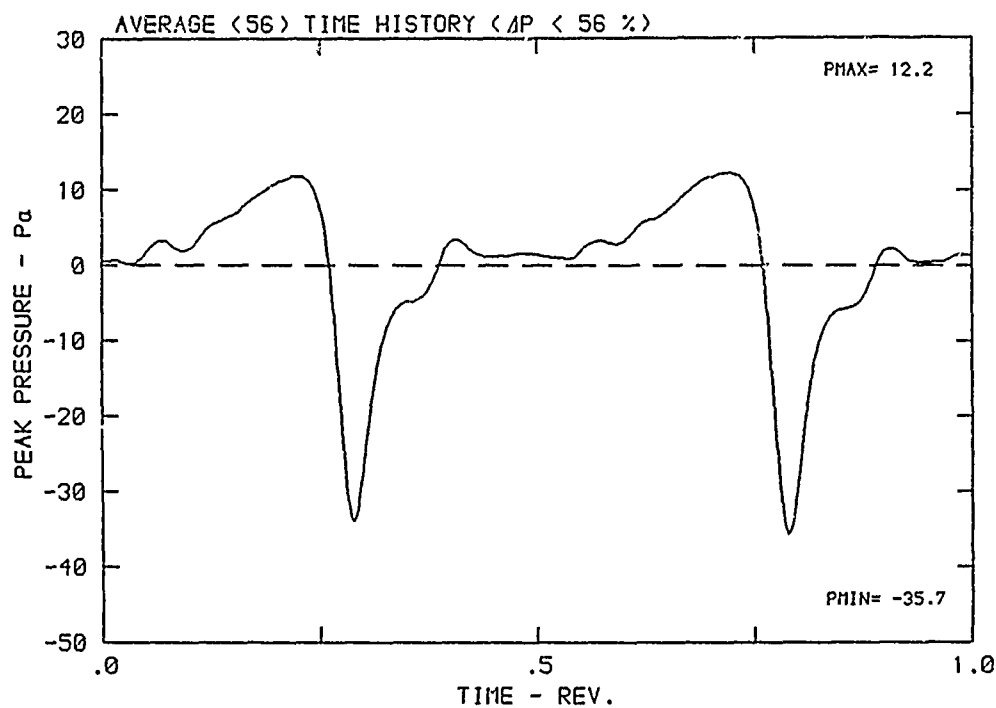
DATA POINT: CN-5 RUN: 98 MP: 2

$\beta$ : 23.7° MH: .7775 n: 2400 rpm v/u: .264  $\phi$ : .0° T: 287.0 K



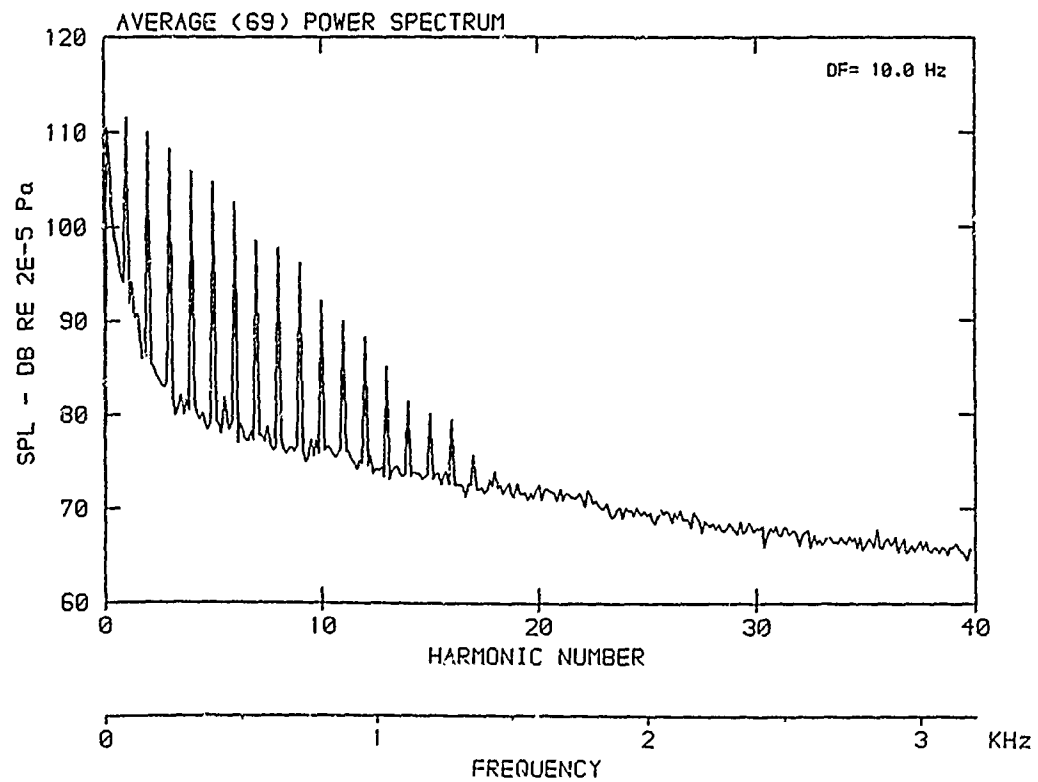
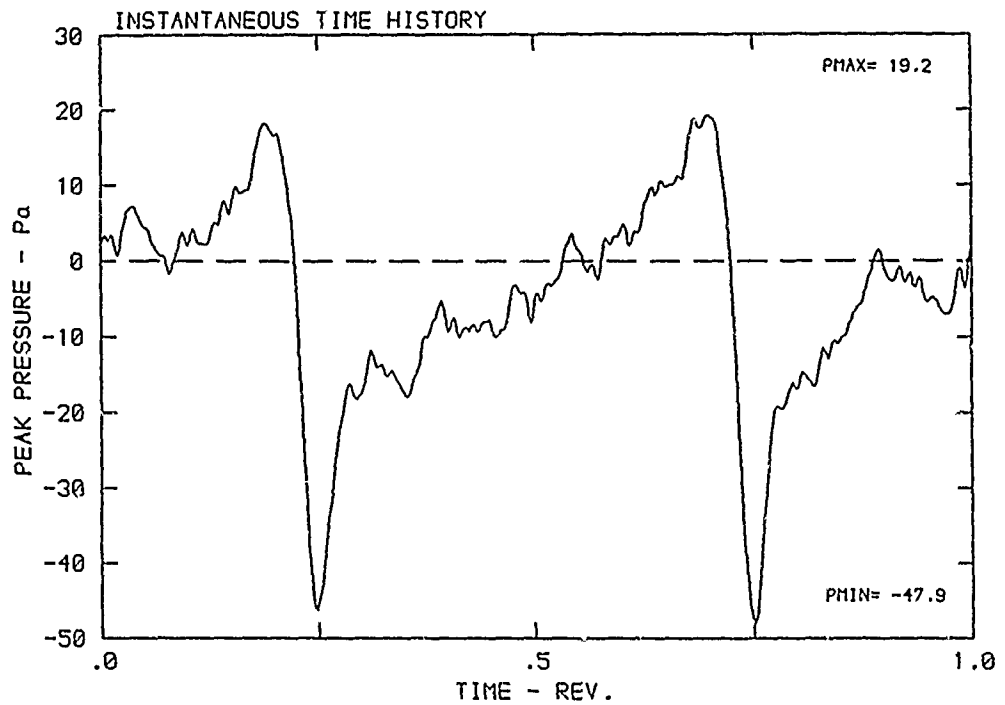
DATA POINT: CN-5 RUN: 98 MP: 2

$\beta$ : 23.7° MH: .7775 n: 2400 rpm v/u: .264  $\phi$ : .0° T: 287.0 K



DATA POINT: CN-5    RUN: 98    MP: 3

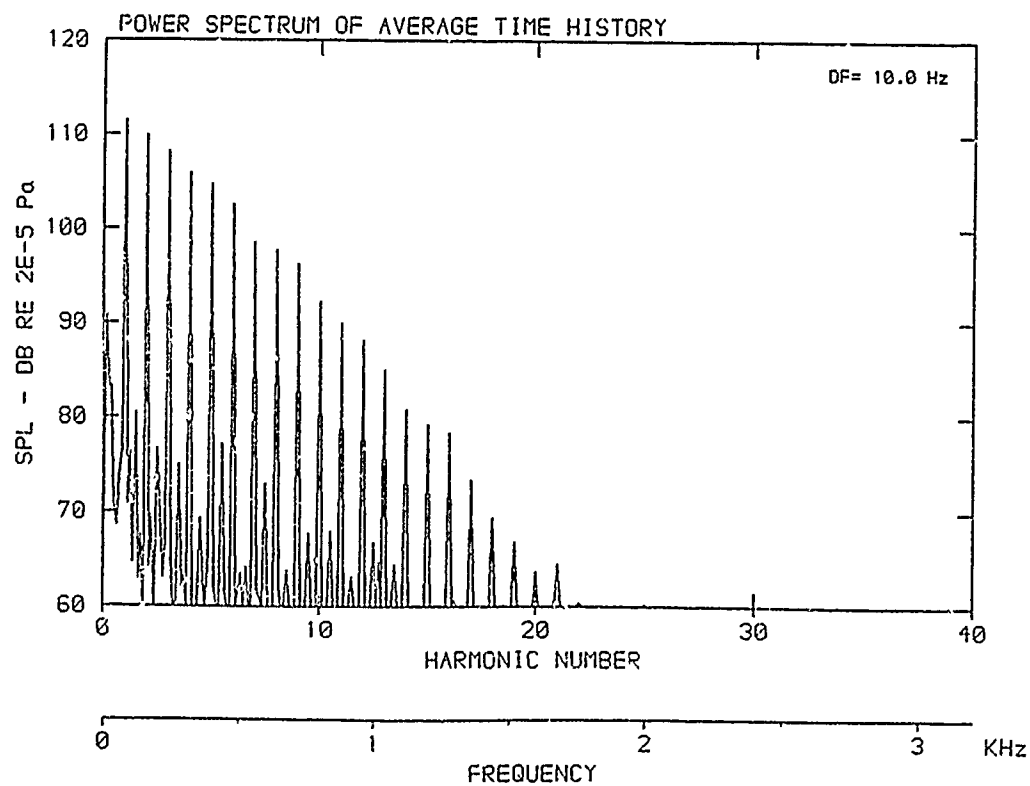
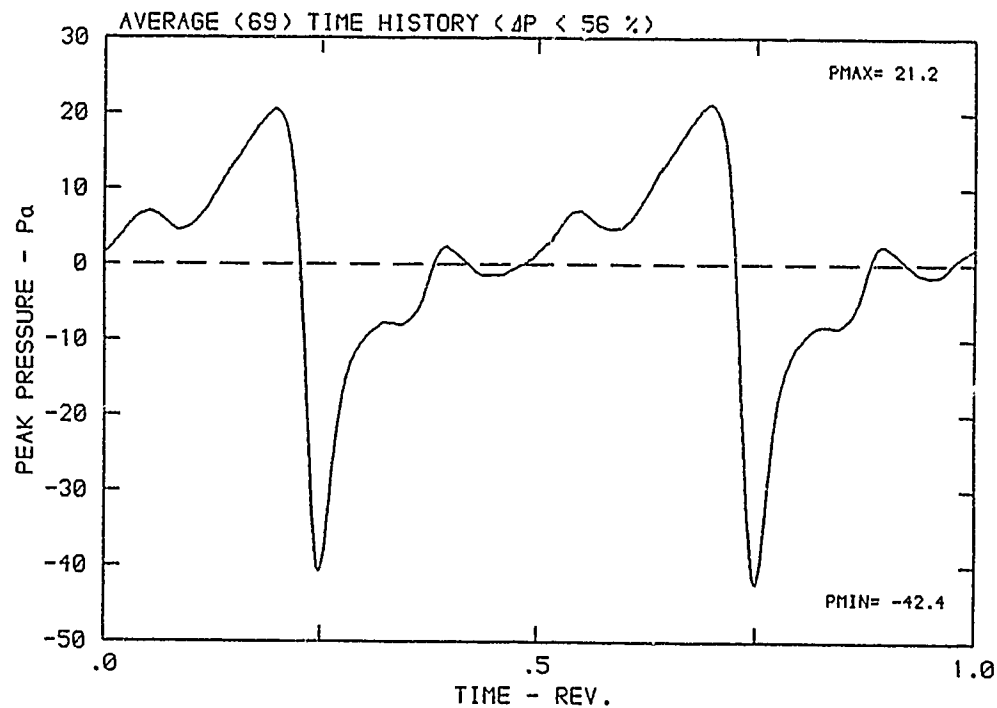
$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K





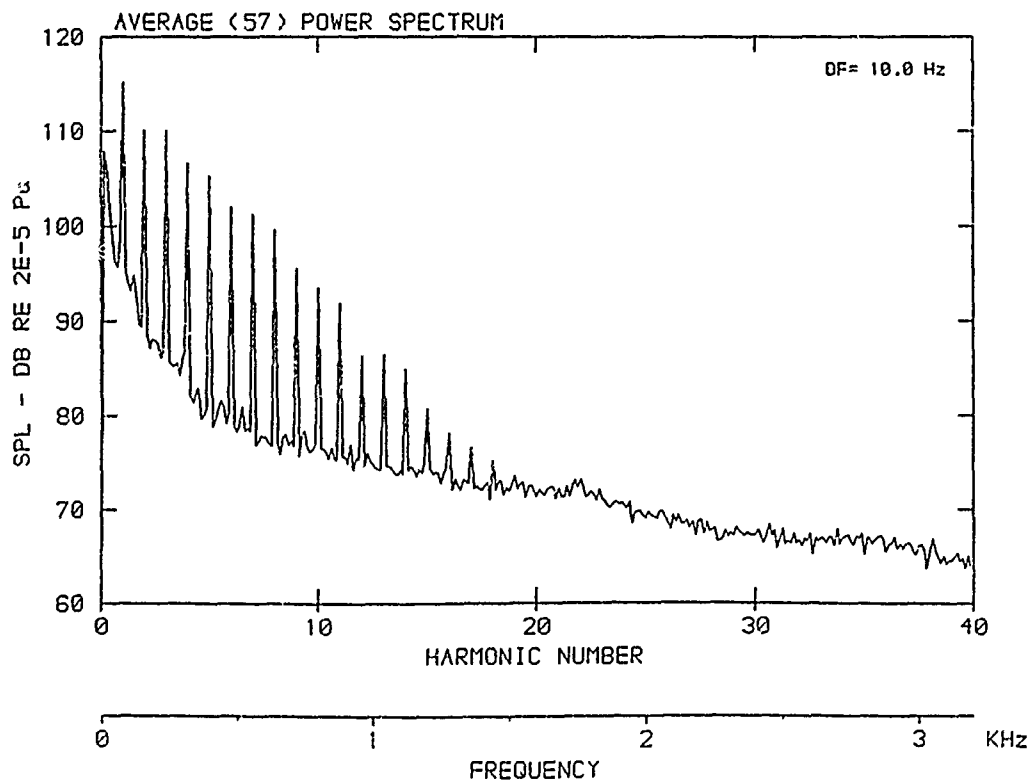
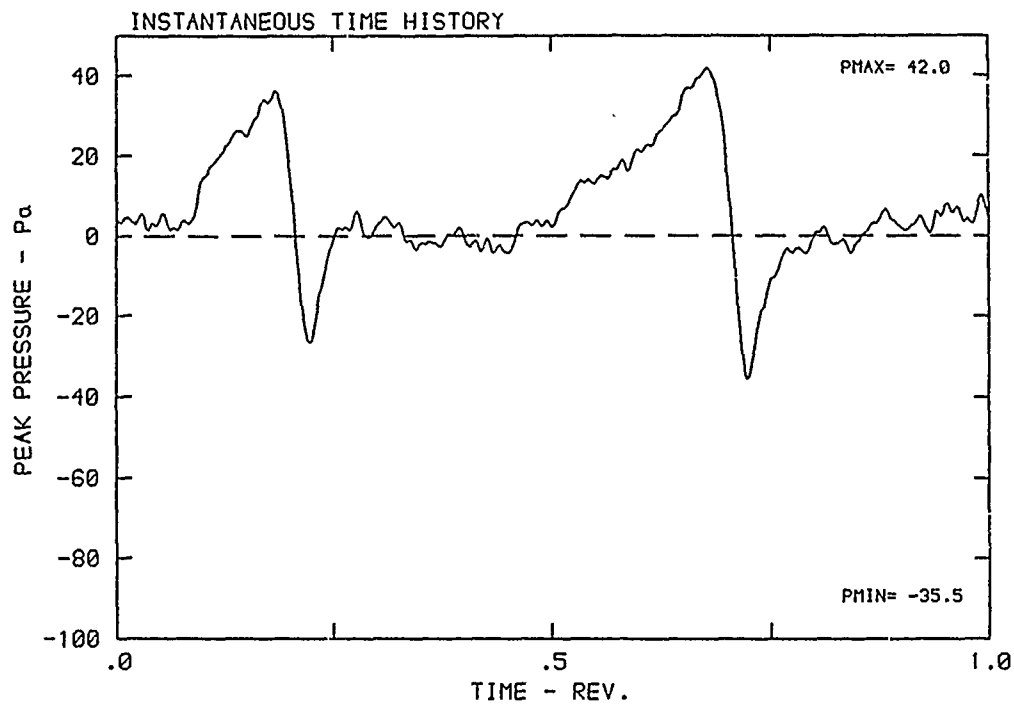
DATA POINT: CN-5    RUN: 98    MP: 3

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



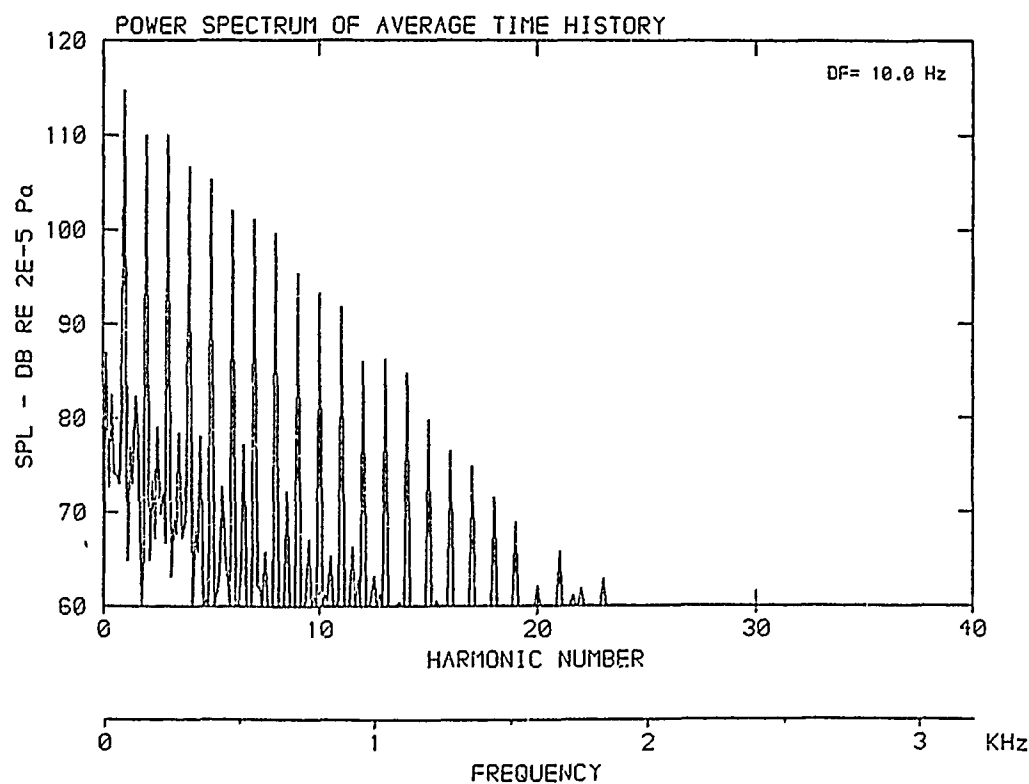
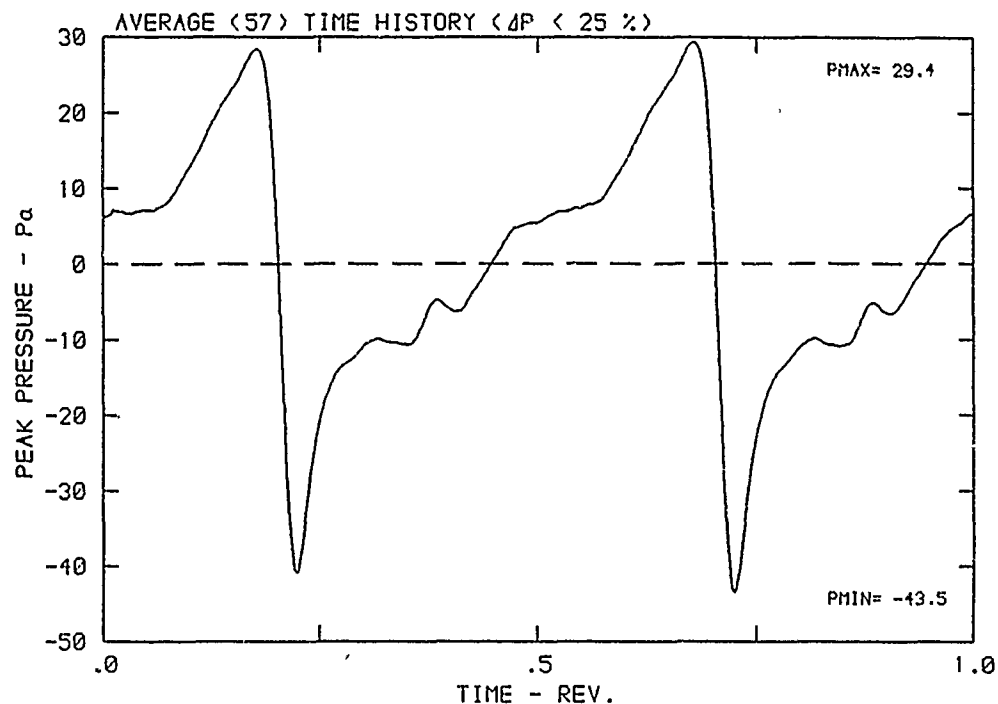
DATA POINT: CN-5      RUN: 98      MP: 4

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



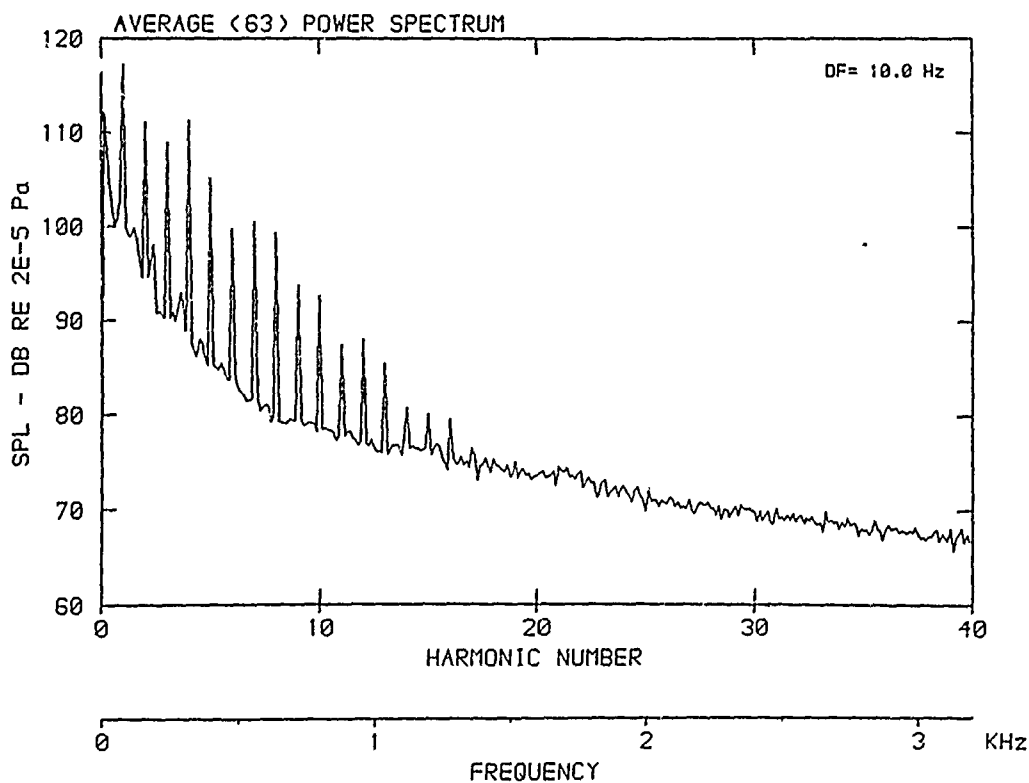
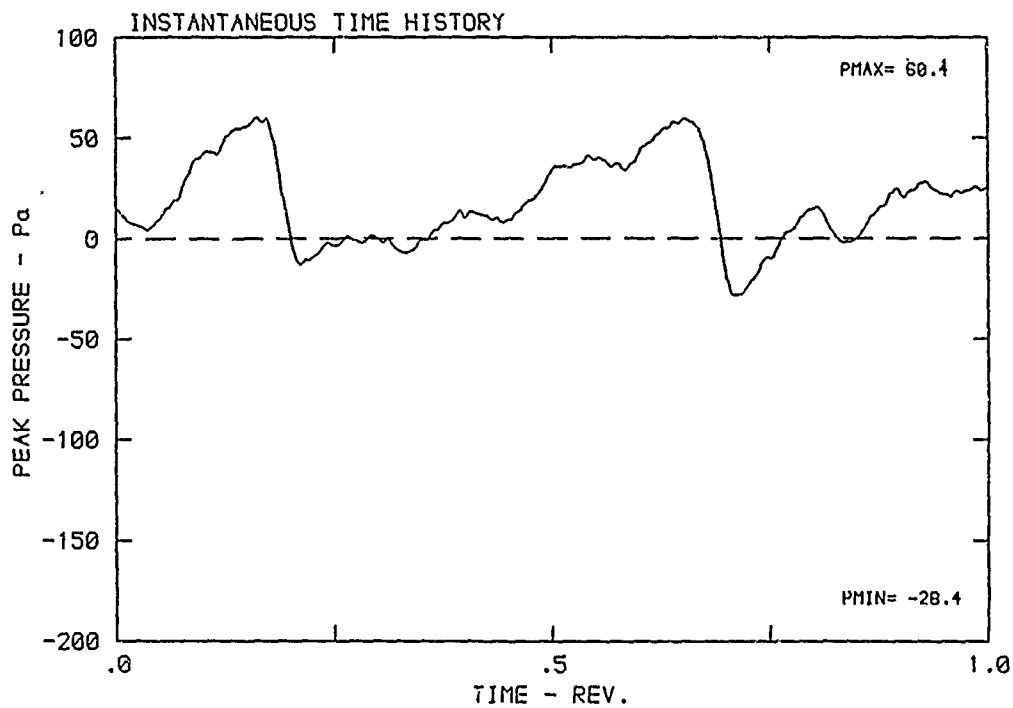
DATA POINT: CN-5      RUN: 98      MP: 4

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



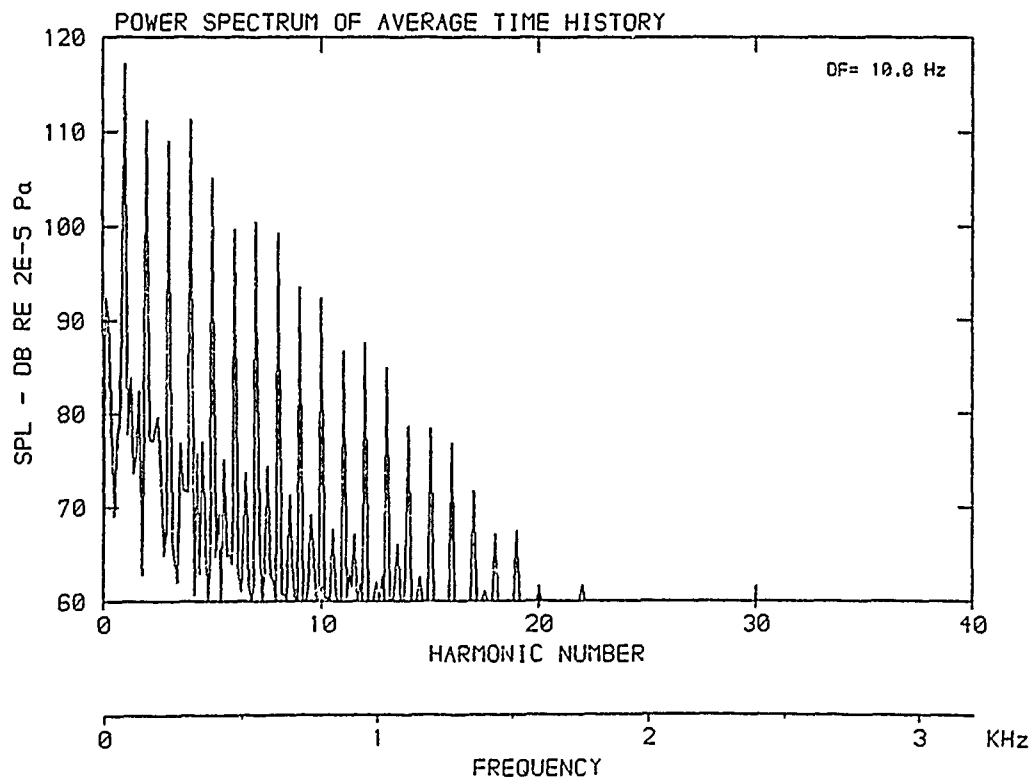
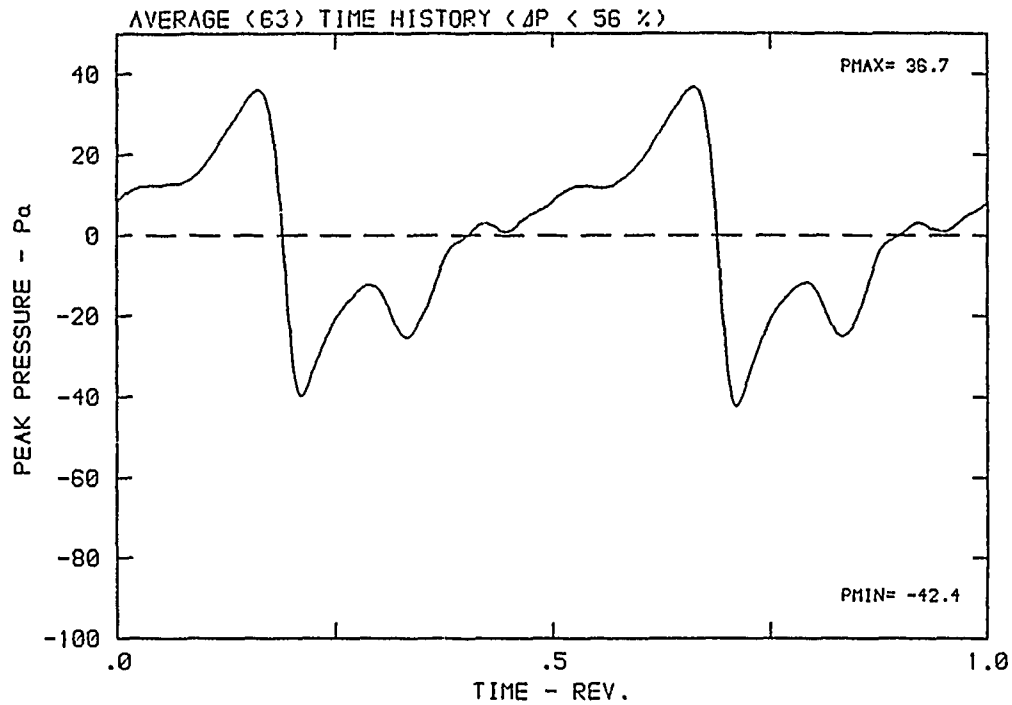
DATA POINT: CN-5      RUN: 98      MP: 5

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



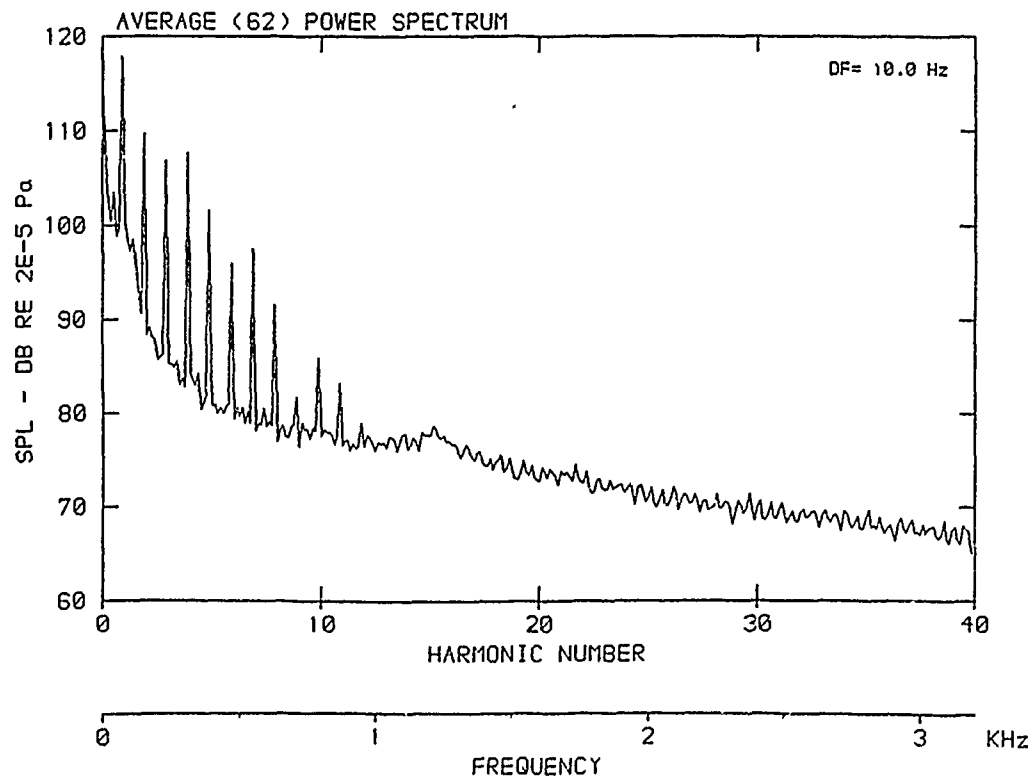
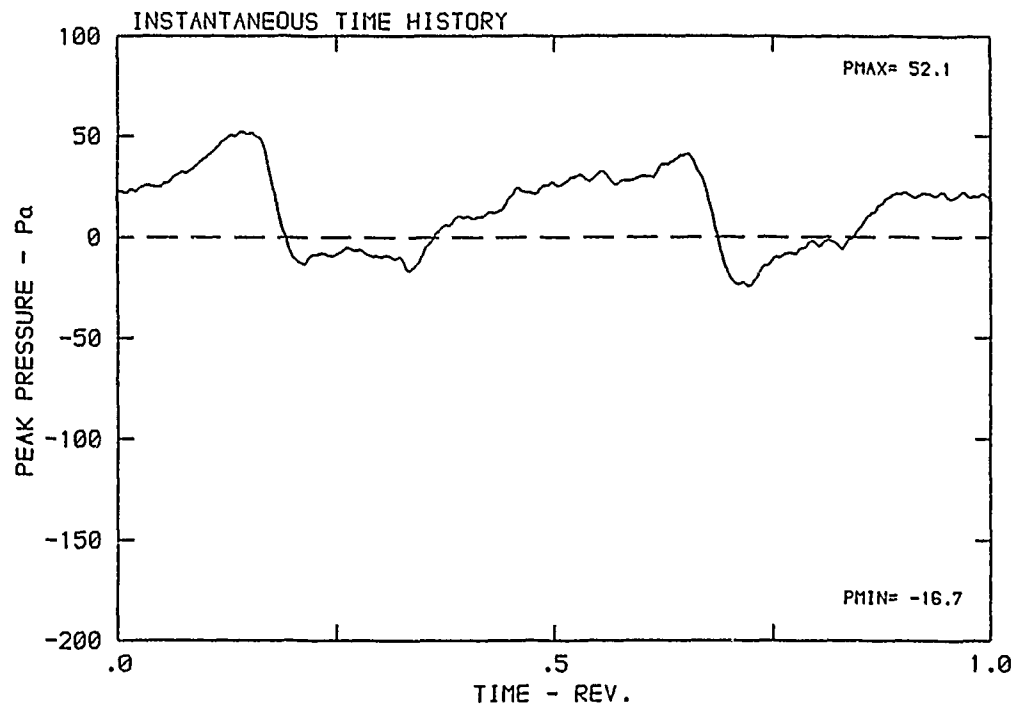
DATA POINT : CN-5      RUN : 98      MP : 5

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



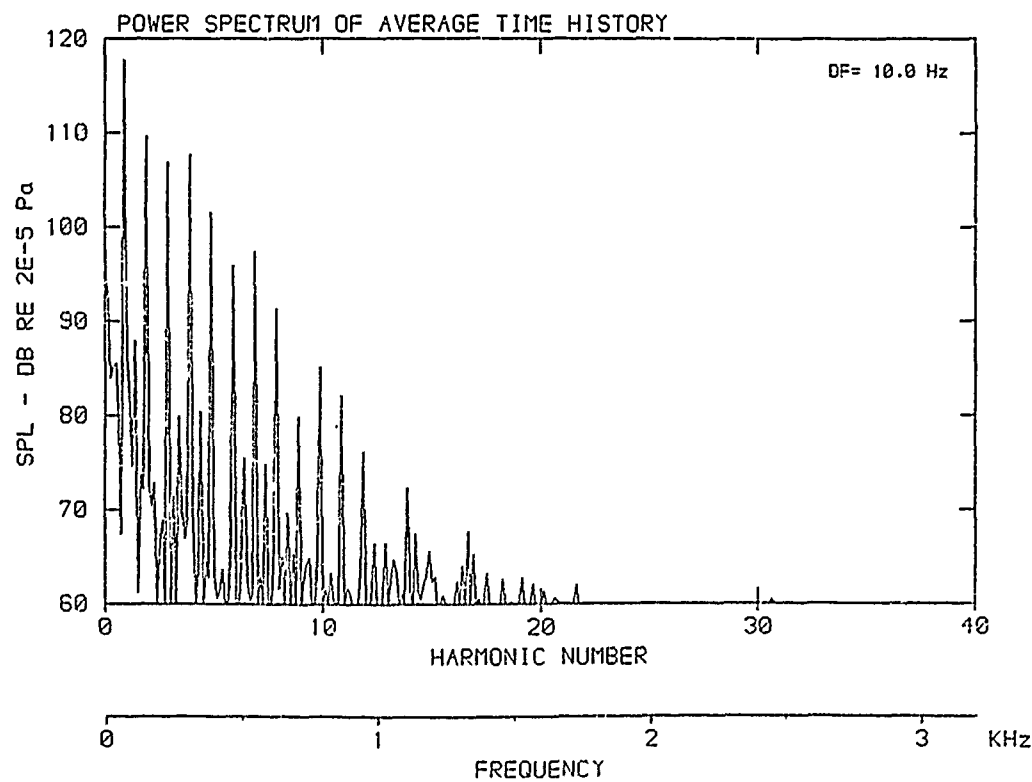
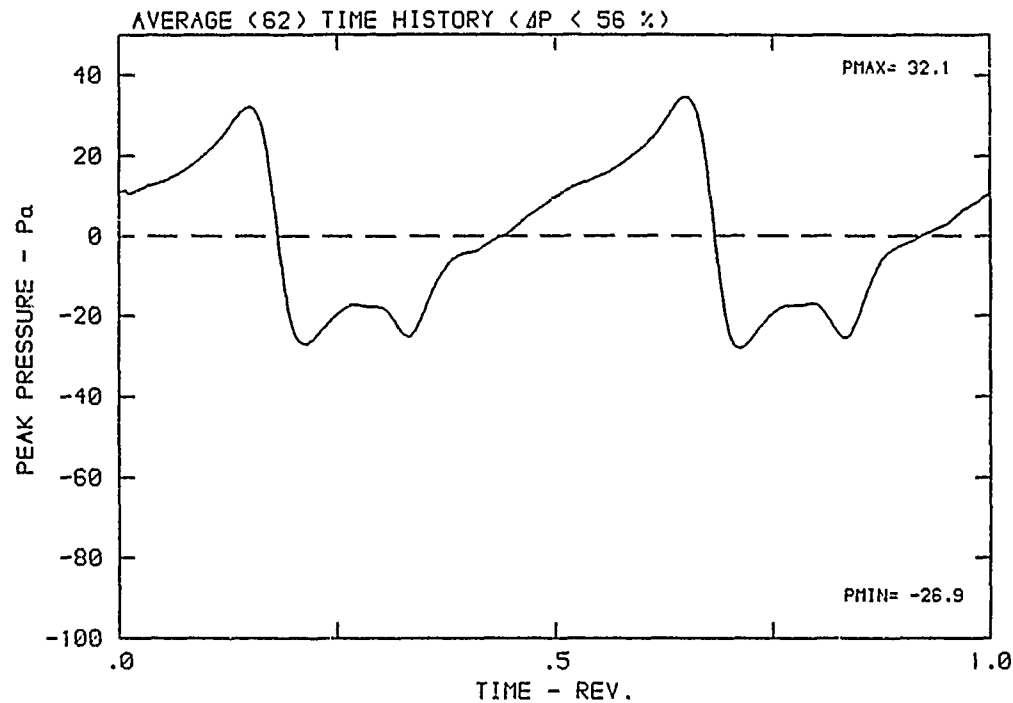
DATA POINT: CN-5 RUN: 98 MP: 6

$\beta$ : 23.7° MH: .7775 n: 2400 rpm v/u: .264  $\phi$ : .0° T: 237.0 K



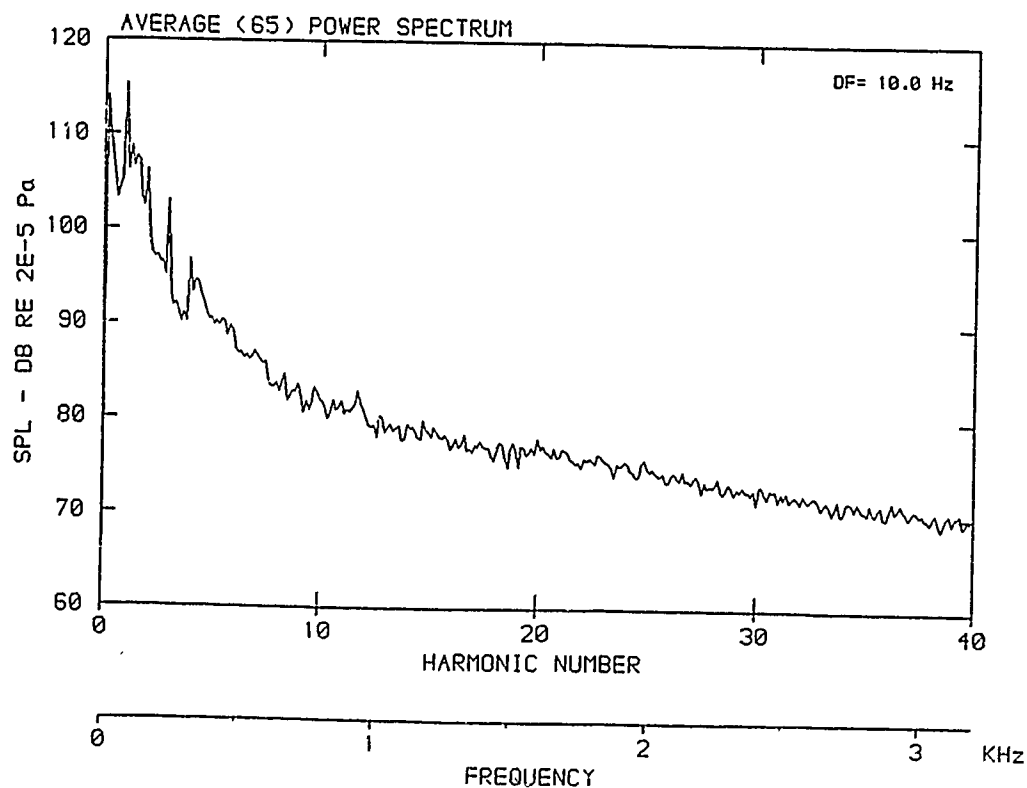
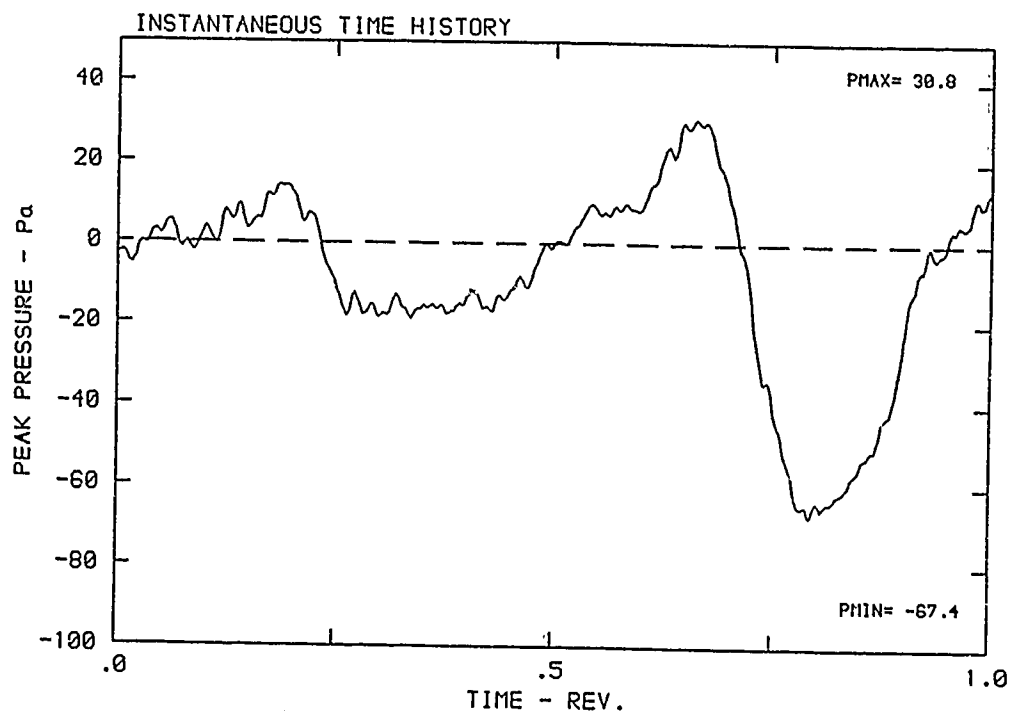
DATA POINT: CN-5    RUN: 98    MP: 6

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



DATA POINT: CN-5      RUN: 98      MP: 7

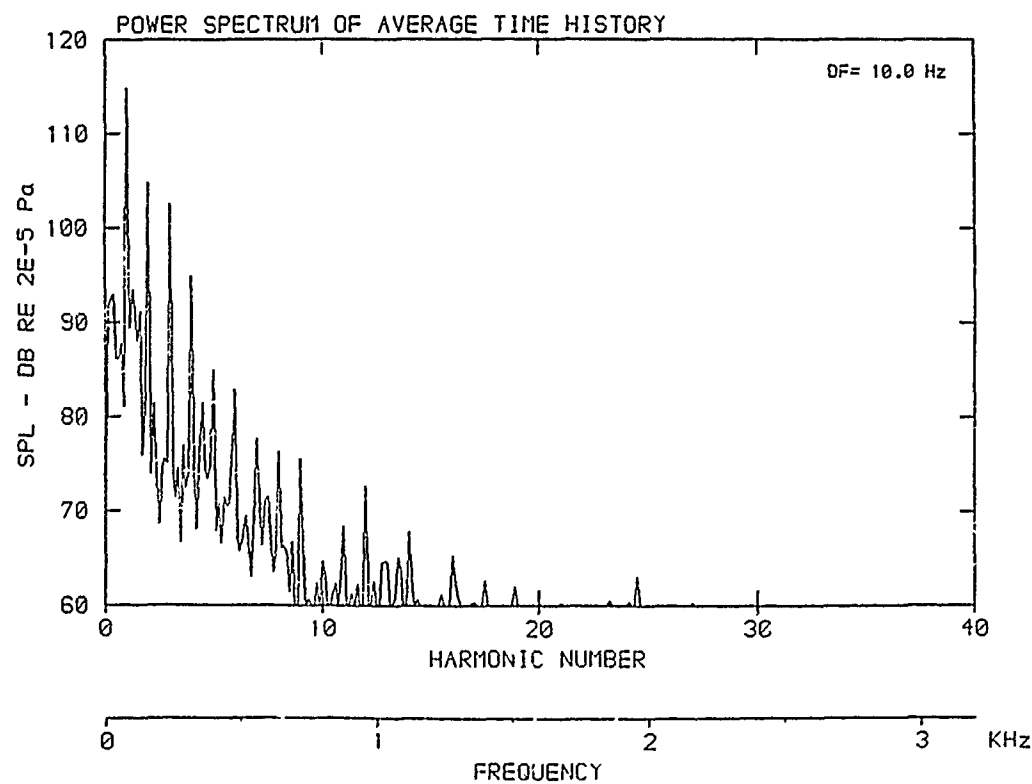
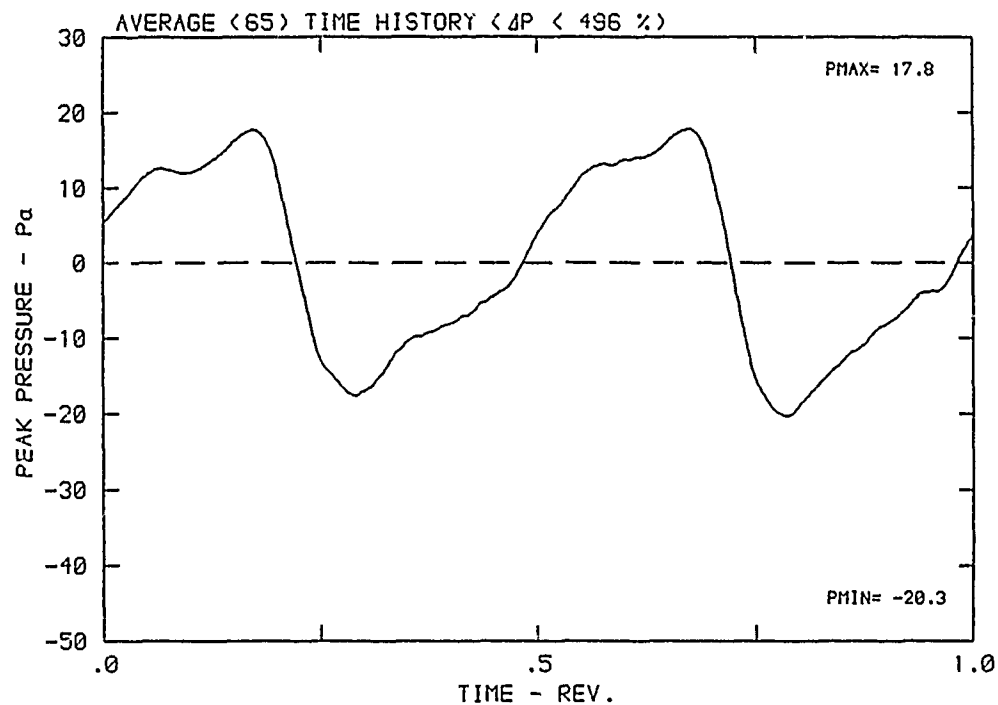
$\beta$ : 23.7°    MH: .7775    n: 2400 rpm     $v/u$ : .264     $\phi$ : .0°    T: 287.0 K





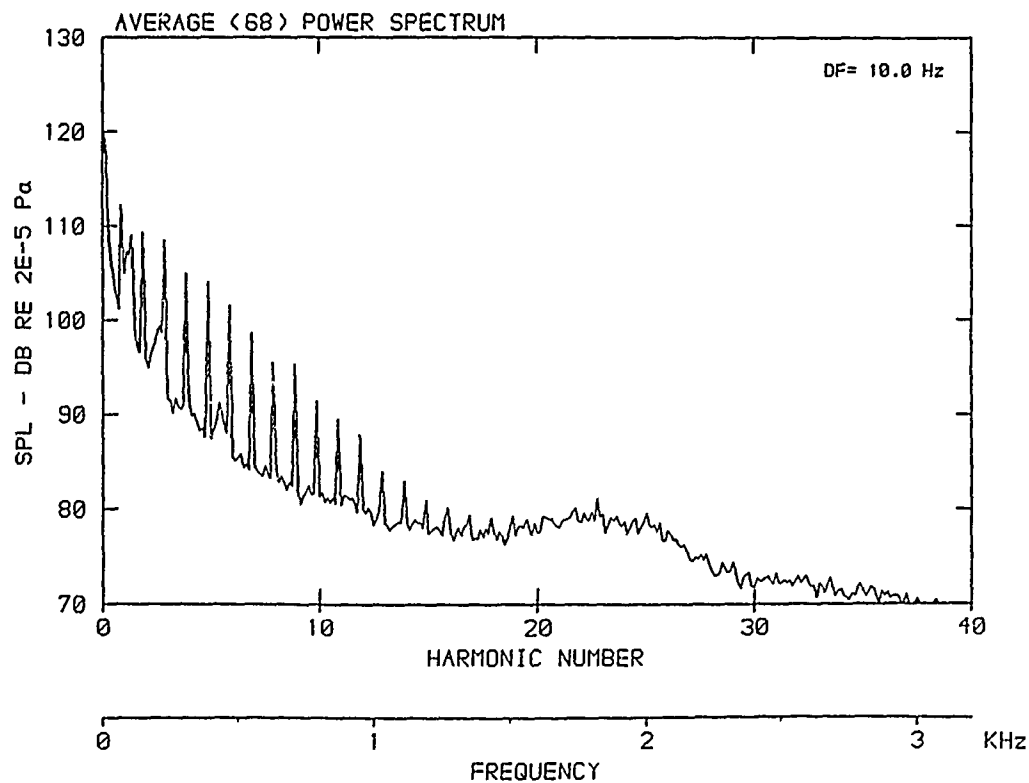
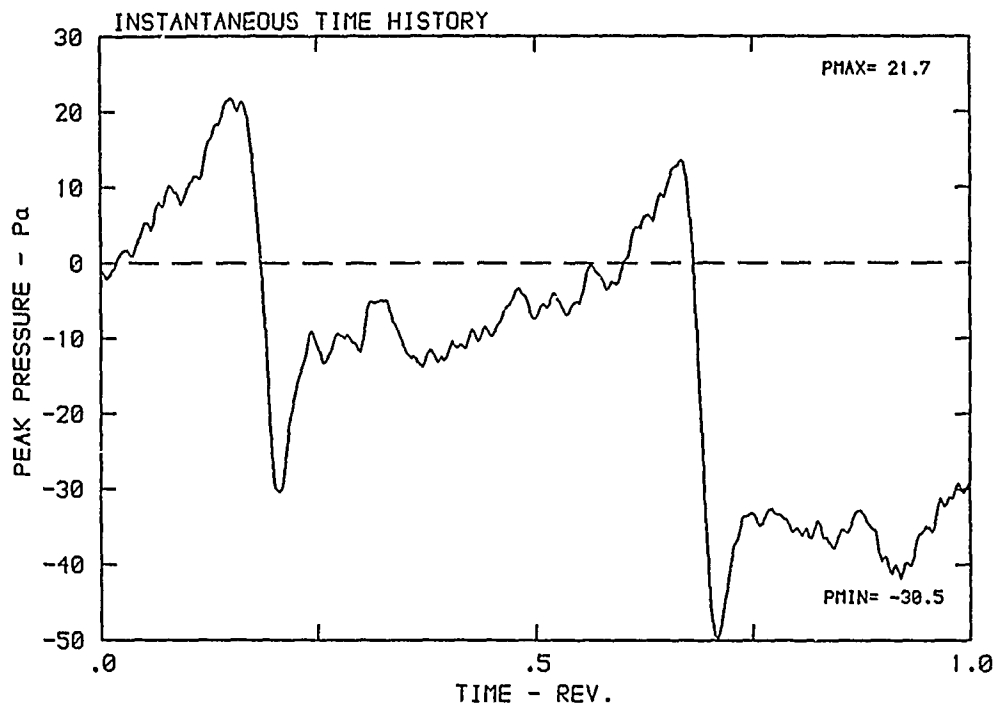
DATA POINT: CN-5 RUN: 98 MP: 7

$\beta$ : 23.7° MH: .7775 n: 2400 rpm v/u: .264  $\phi$ : .0° T: 287.0 K



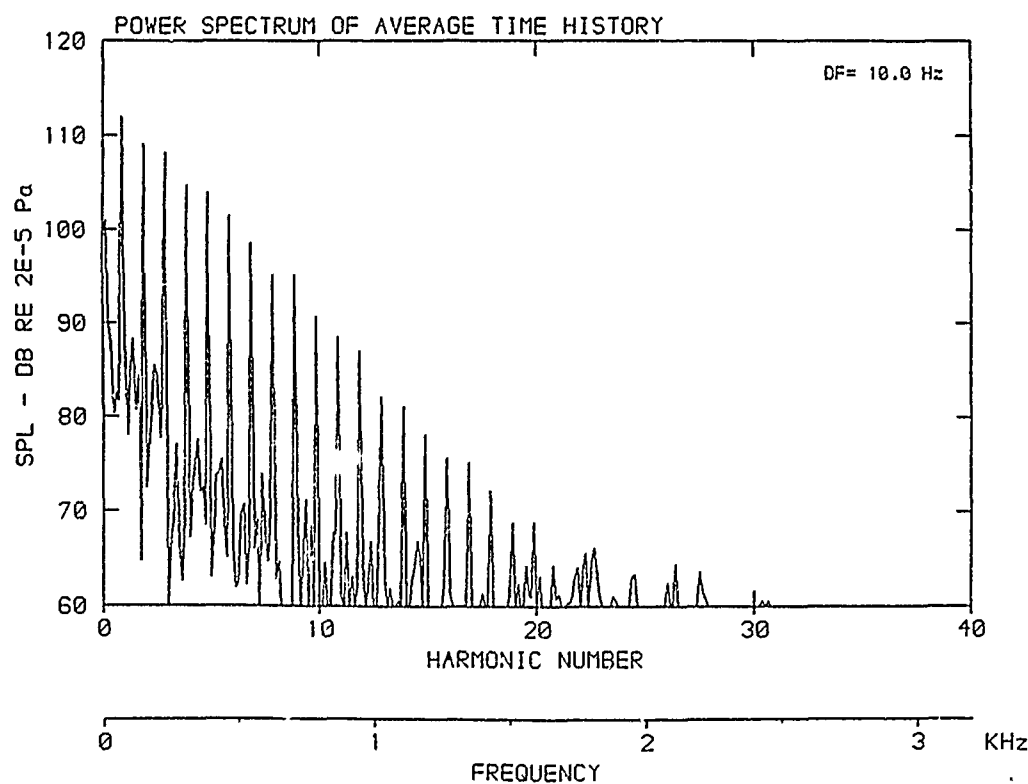
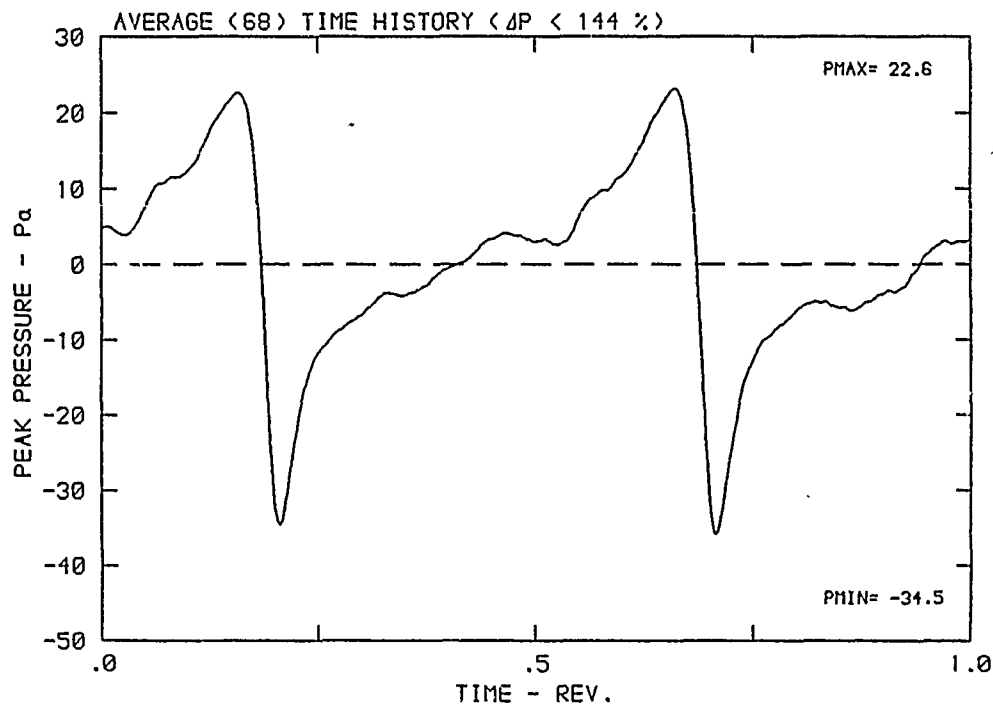
DATA POINT: CN-5      RUN: 98      MP: 8

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



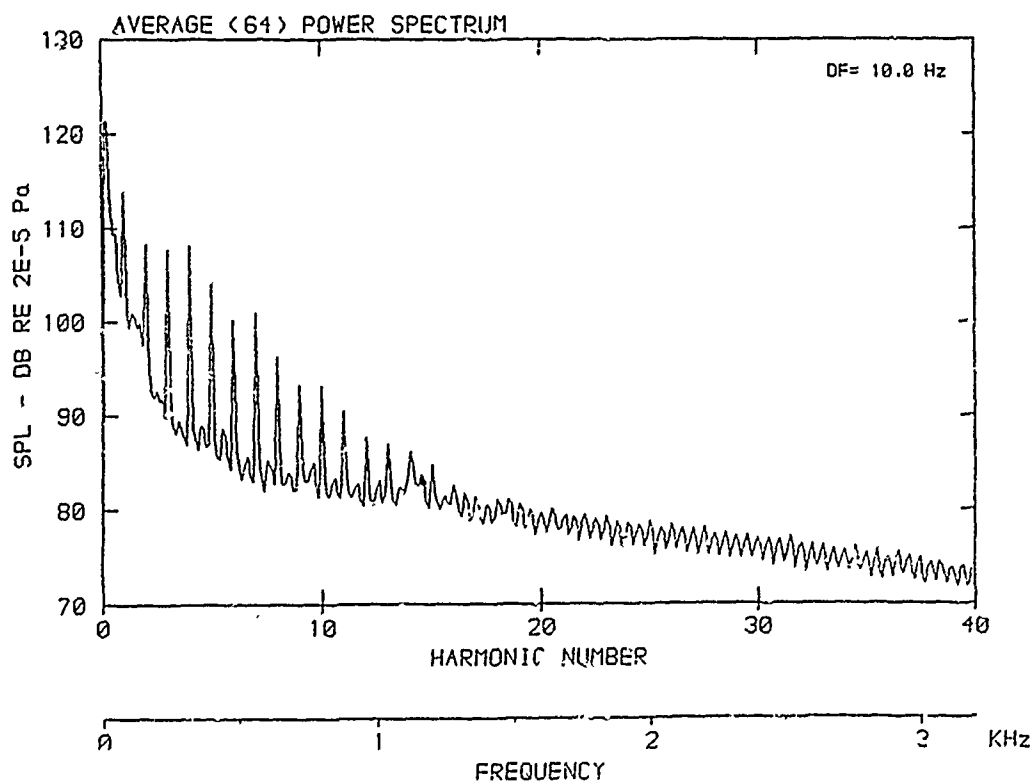
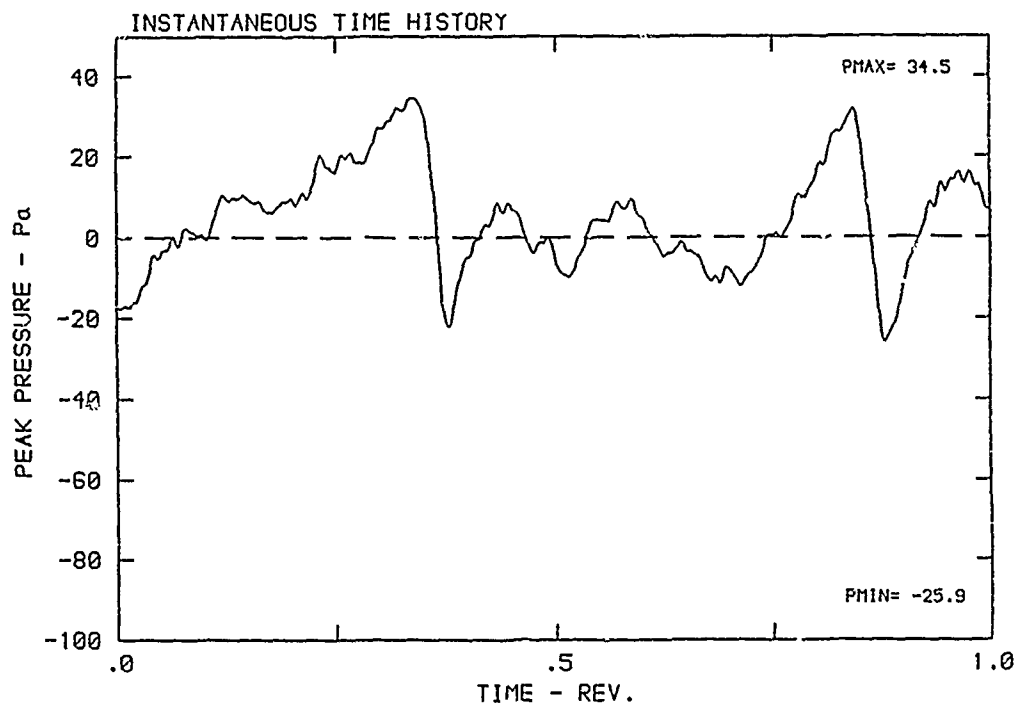
DATA POINT: CN-5    RUN: 98    MP: 8

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



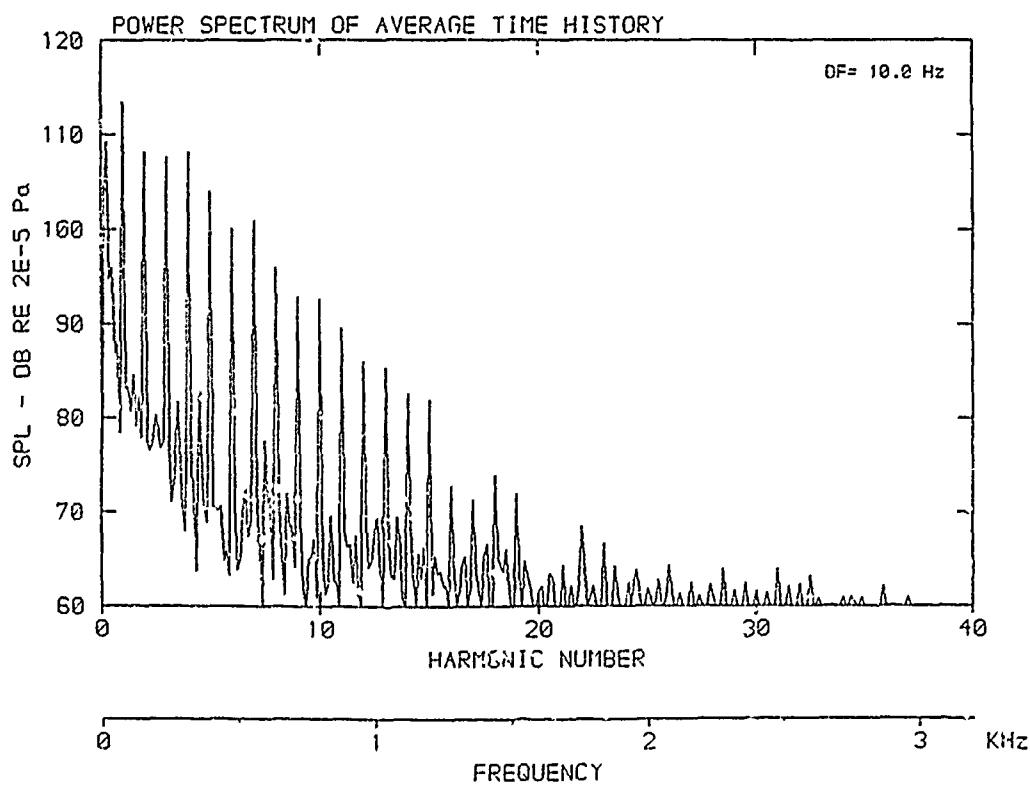
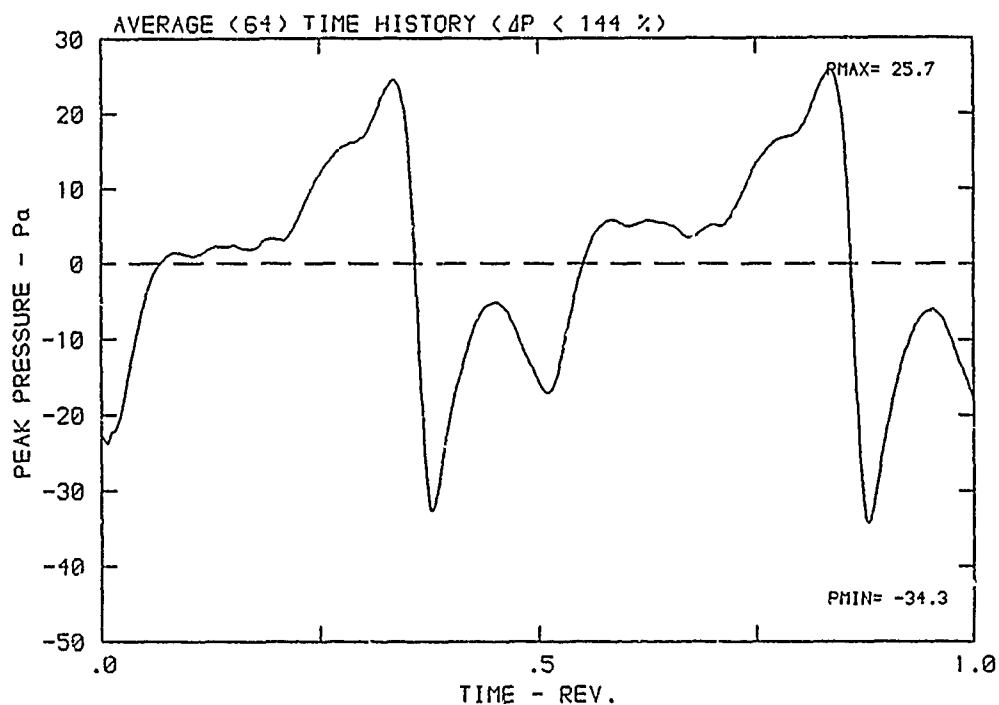
DATA POINT: CN-5    RUN: 98    MP: 9

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



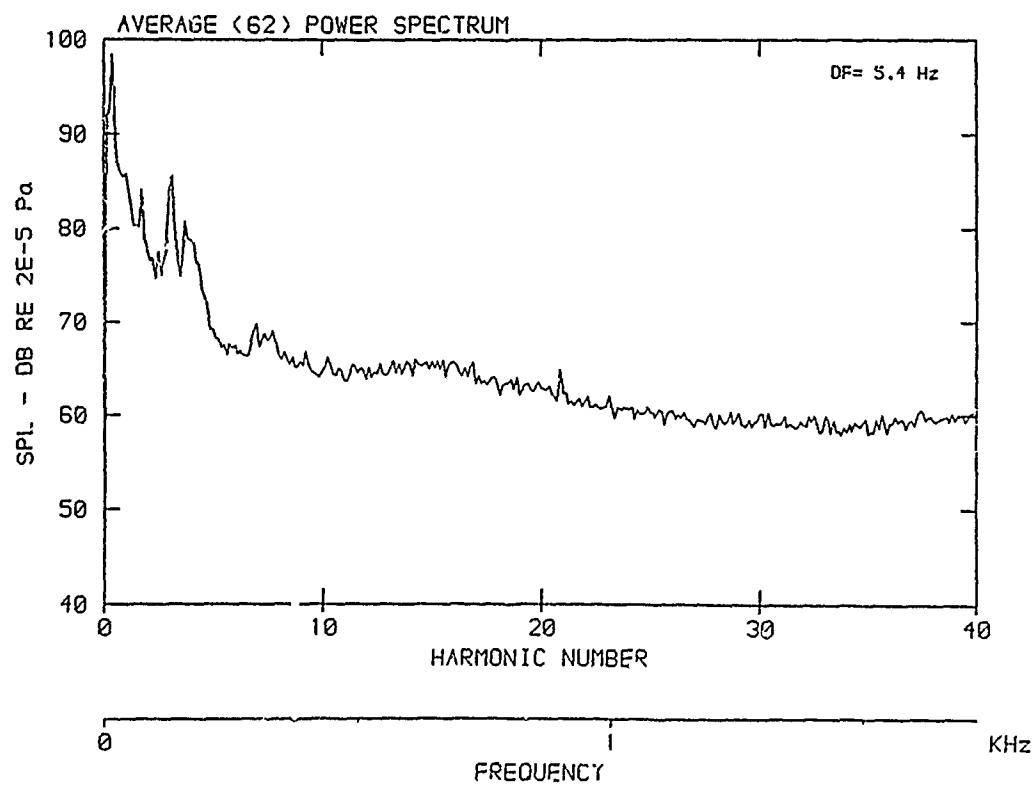
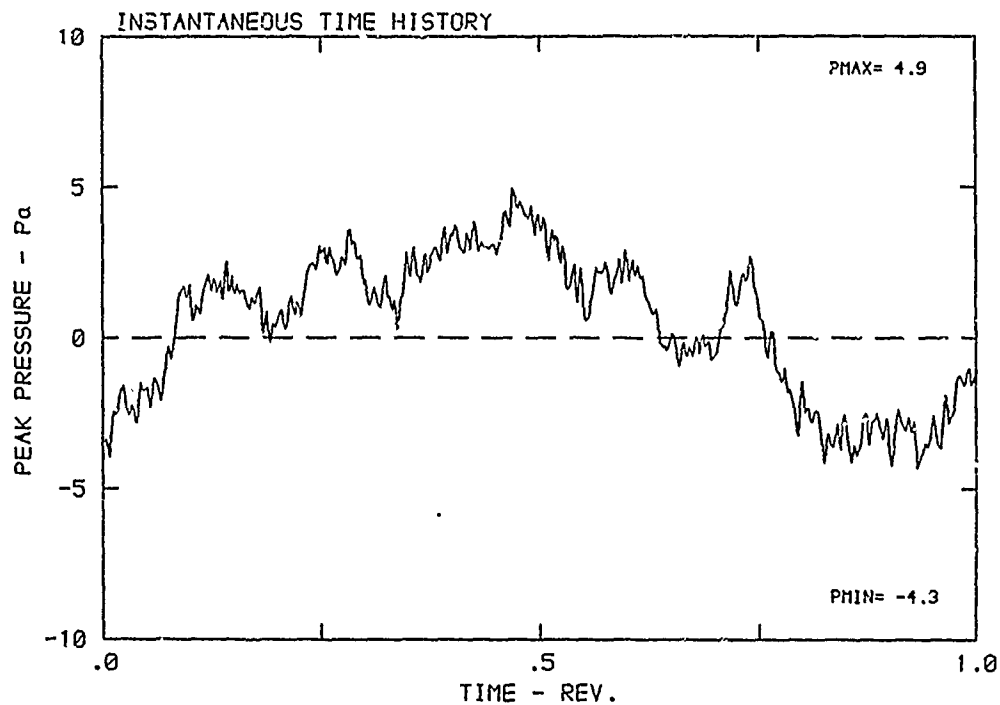
DATA POINT: CN-5      RUN: 98      MP: 9

$\beta$ : 23.7°    MH: .7775    n: 2400 rpm    v/u: .264     $\phi$ : .0°    T: 287.0 K



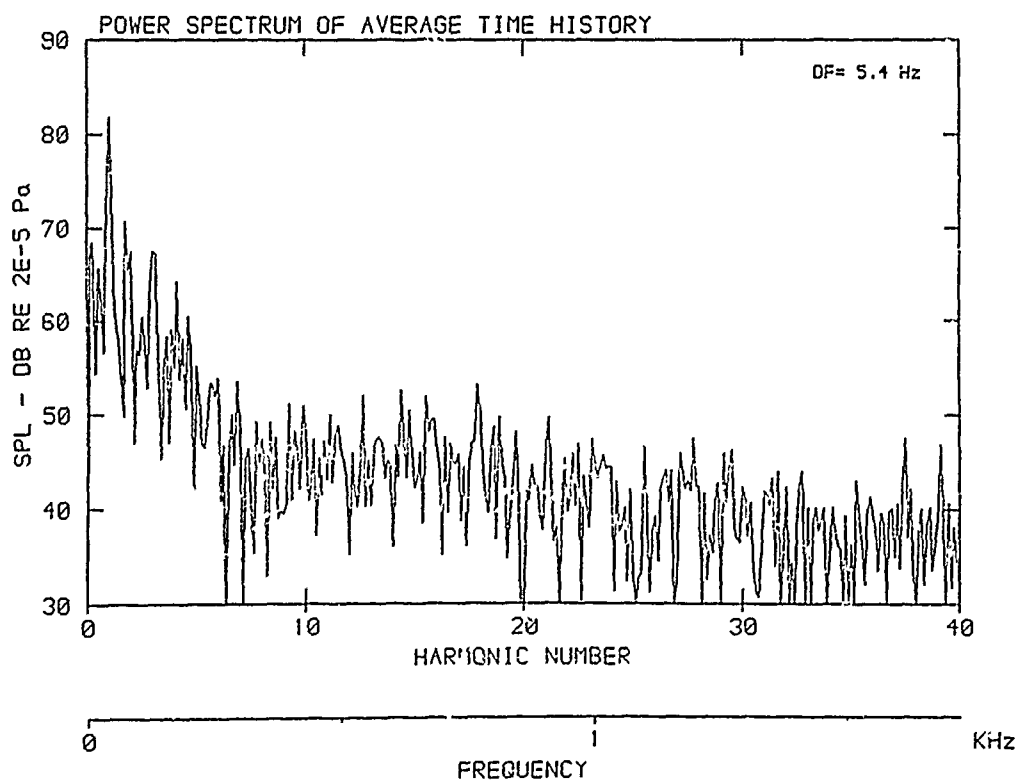
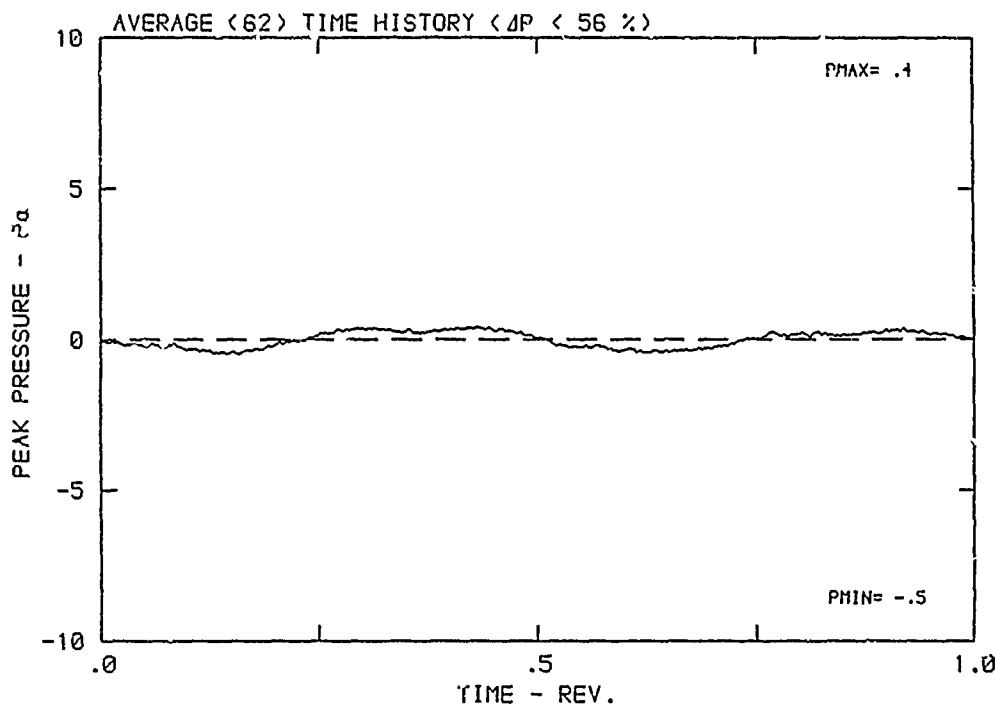
DATA POINT: CN-6 RUN: 102 MP: 1

$\beta$ : 23.7° MH: .4321 n: 1294 rpm  $v/u$ : .370  $\phi$ : .0° T: 287.2 K



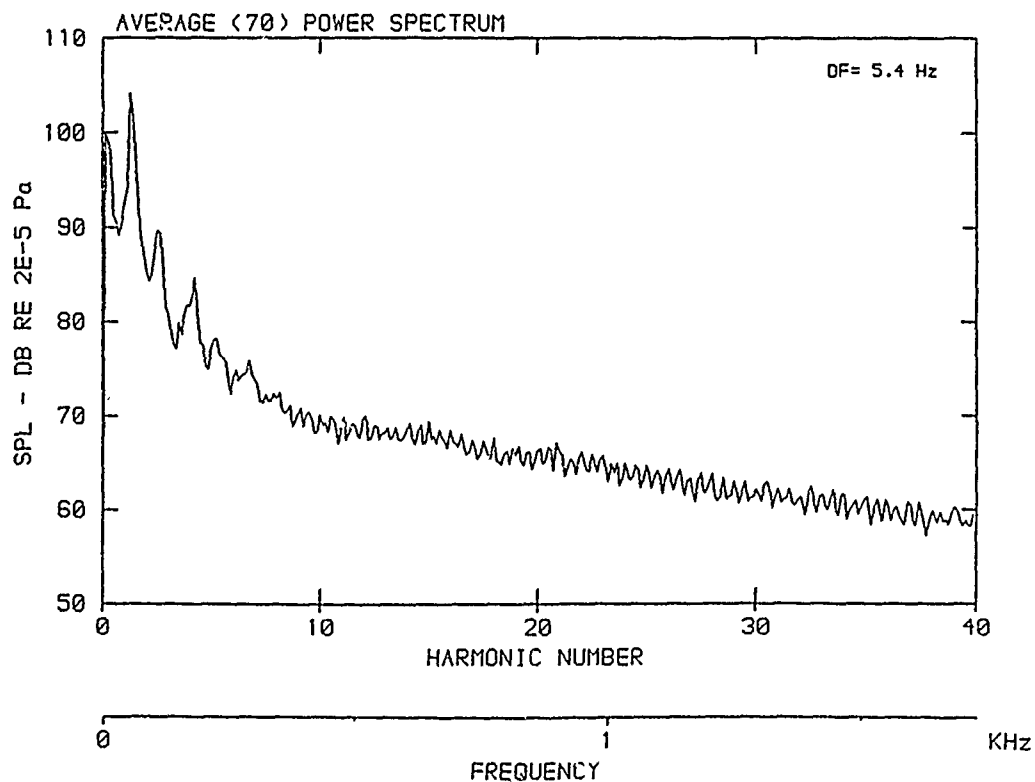
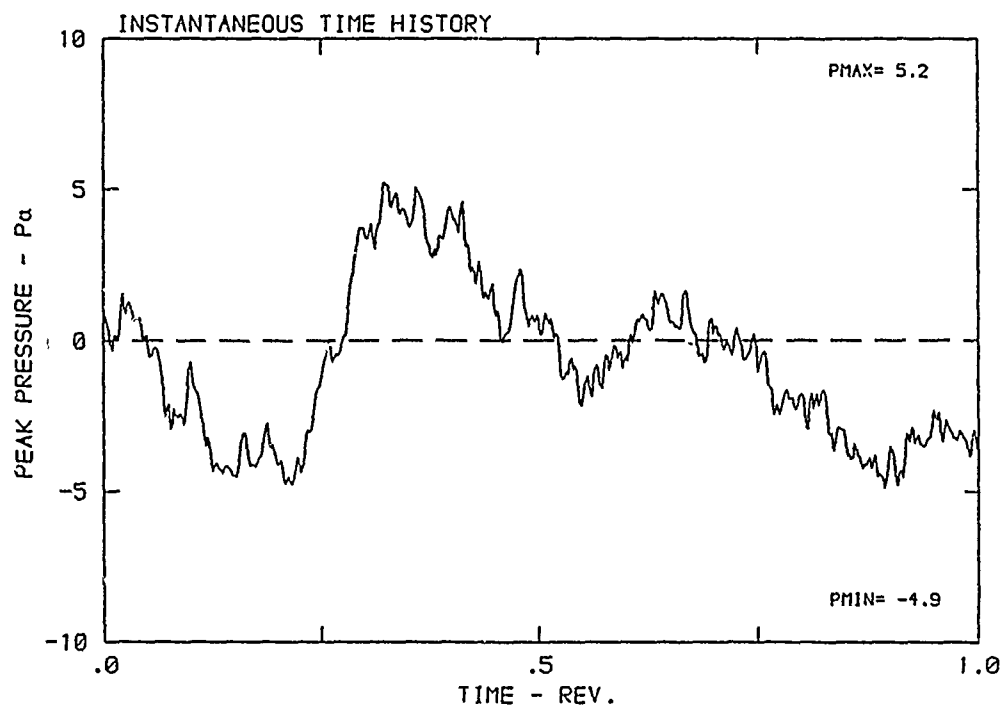
DATA POINT: CN-6 RUN: 102 MP: 1

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



DATA POINT: CN-6 RUN: 102 MP: 2

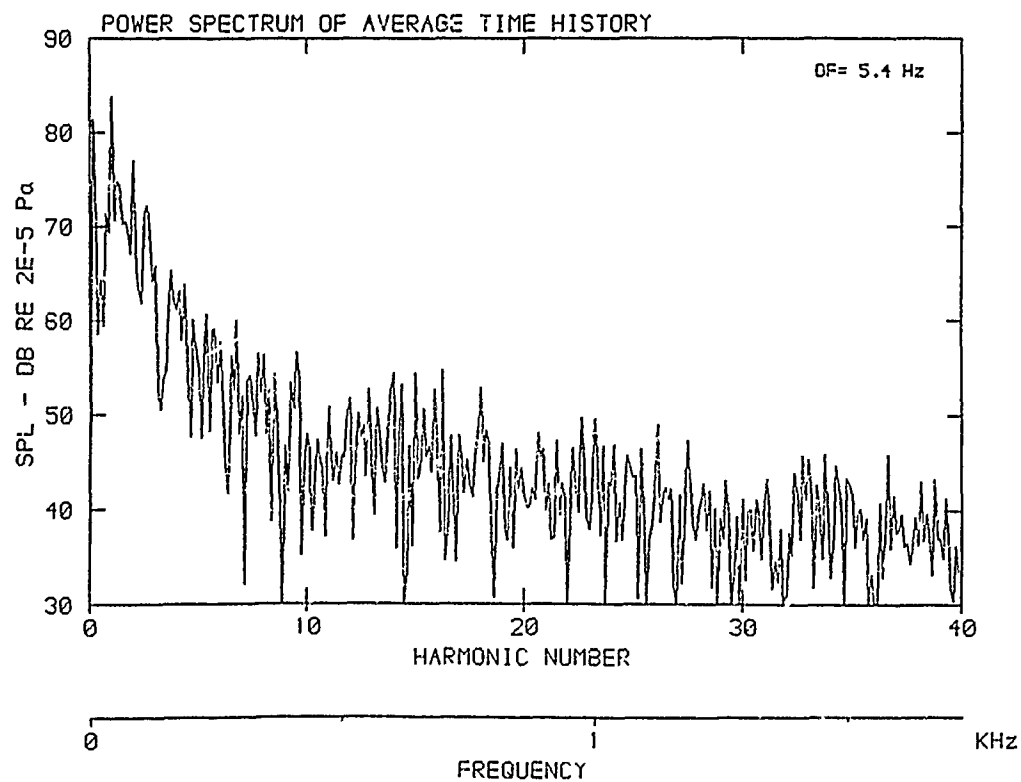
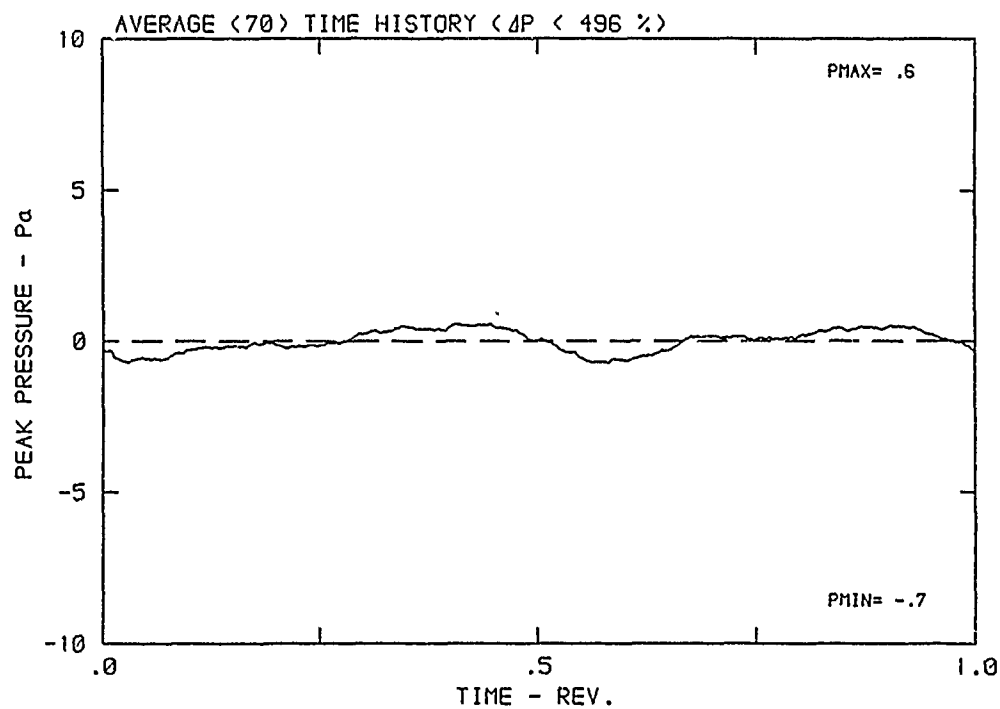
$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K





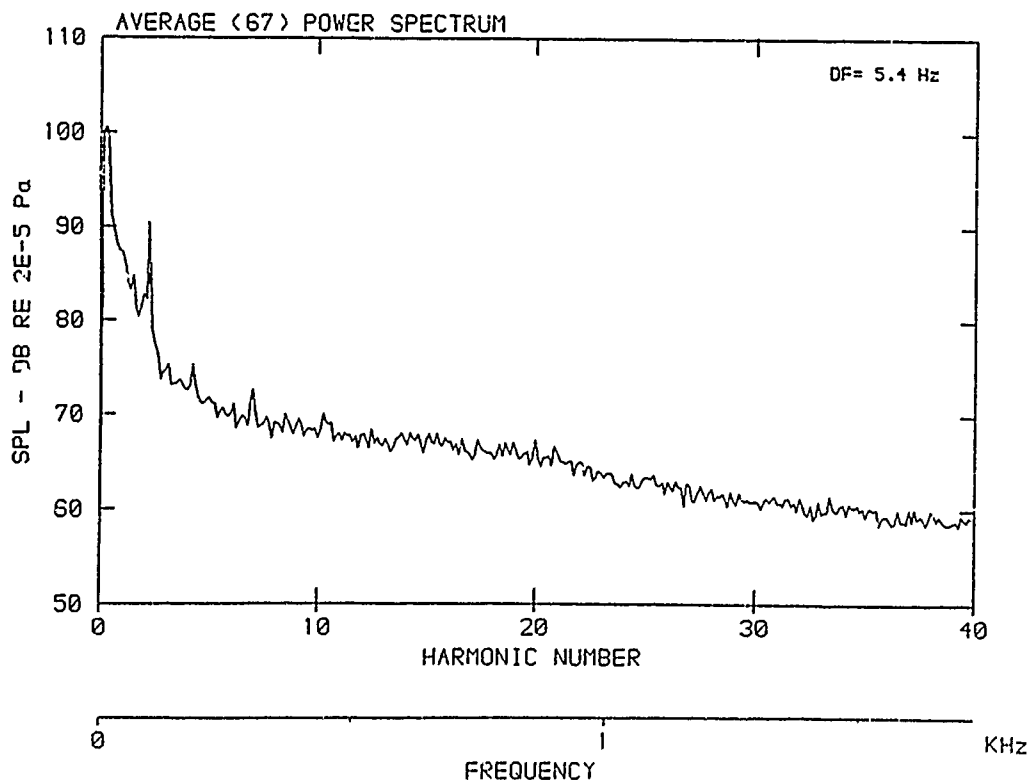
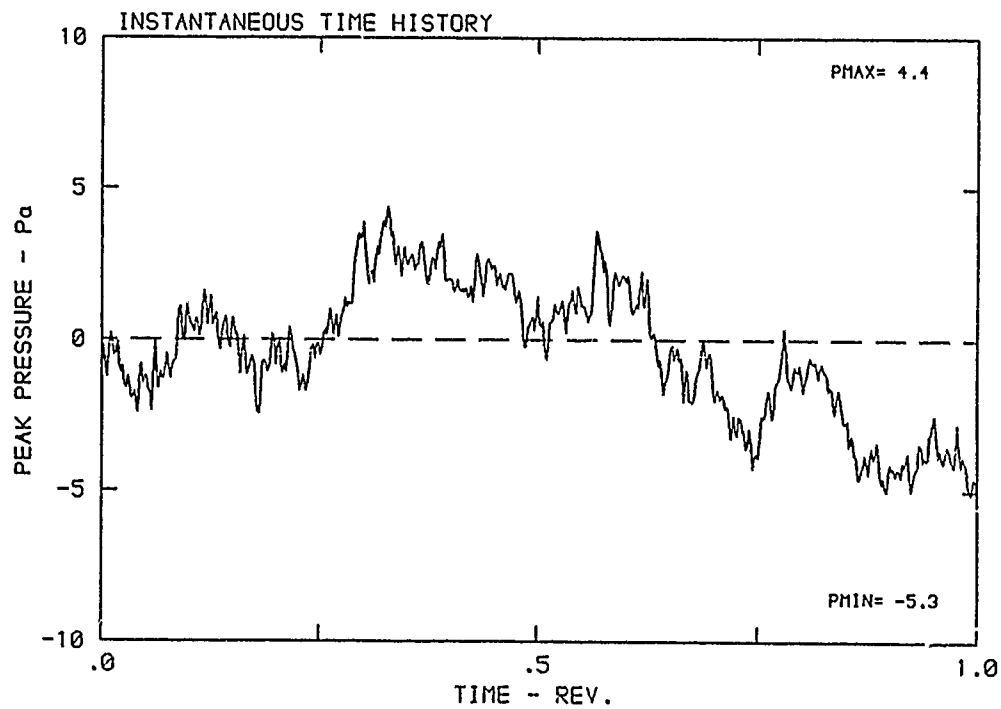
DATA POINT: CN-6 RUN: 102 MP: 2

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



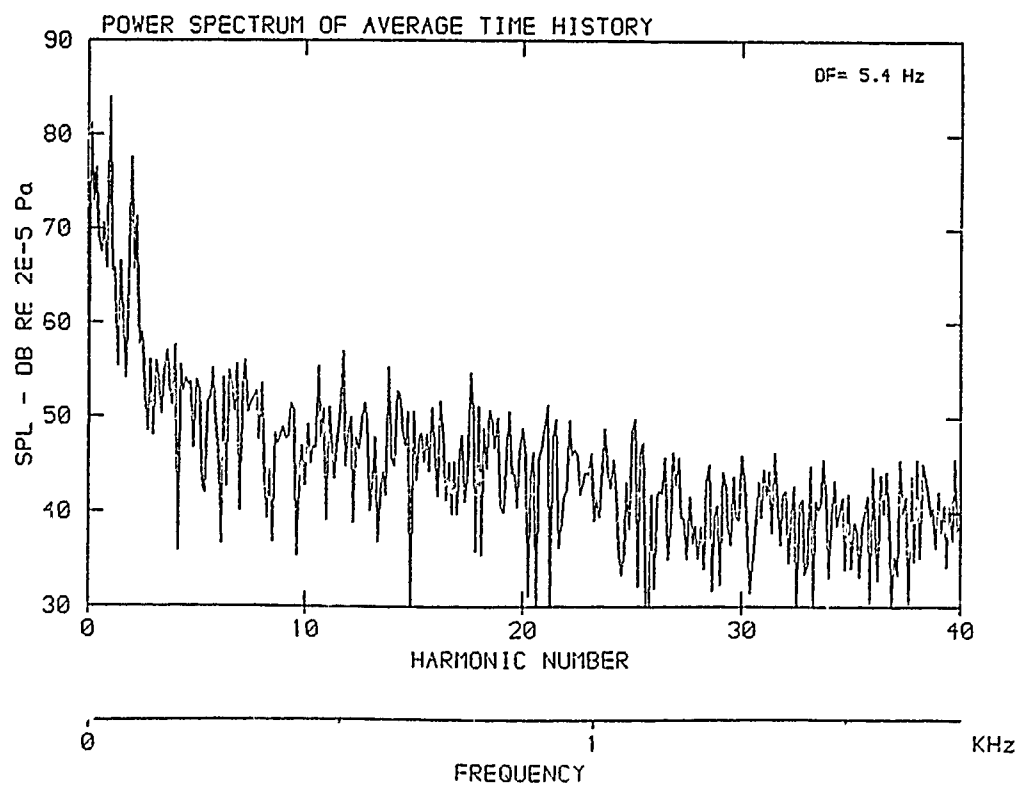
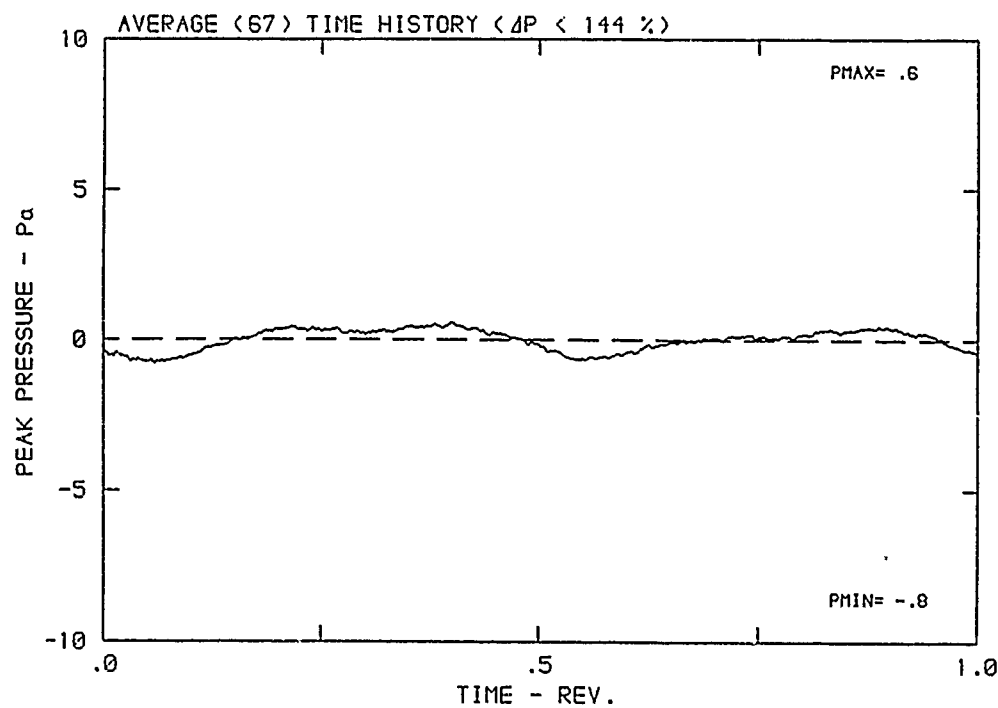
DATA POINT: CN-6 RUN: 102 MP: 3

$\beta$ : 23.7° MH: .4321 n: 1294 rpm  $v/u$ : .370  $\phi$ : .0° T: 287.2 K



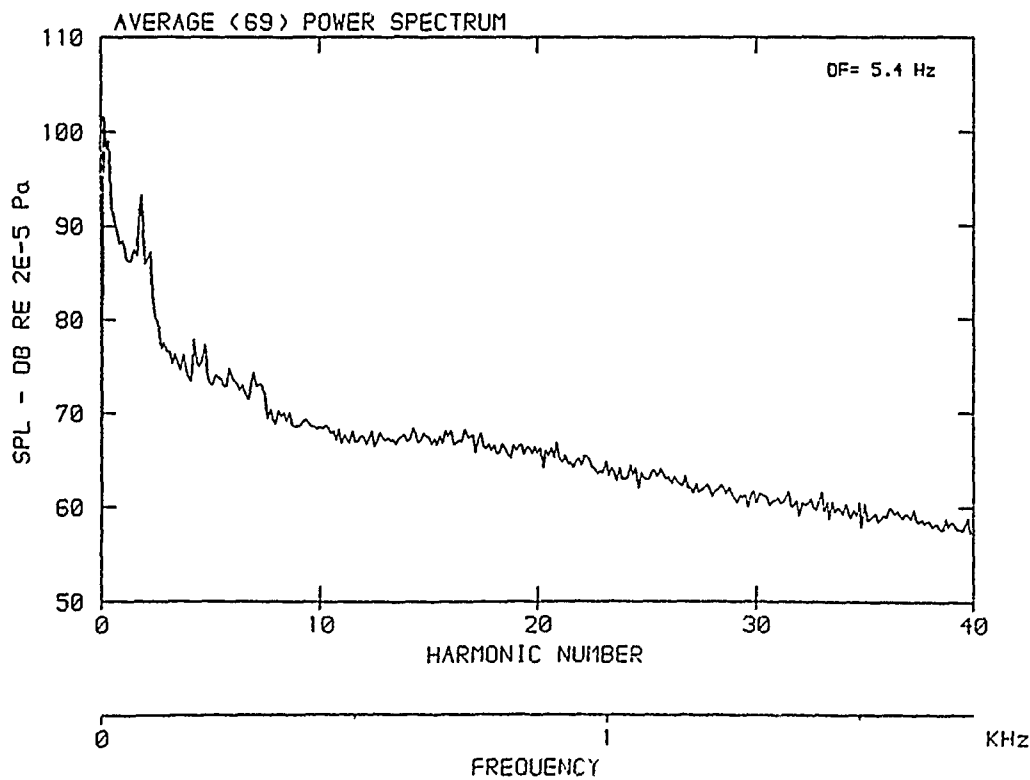
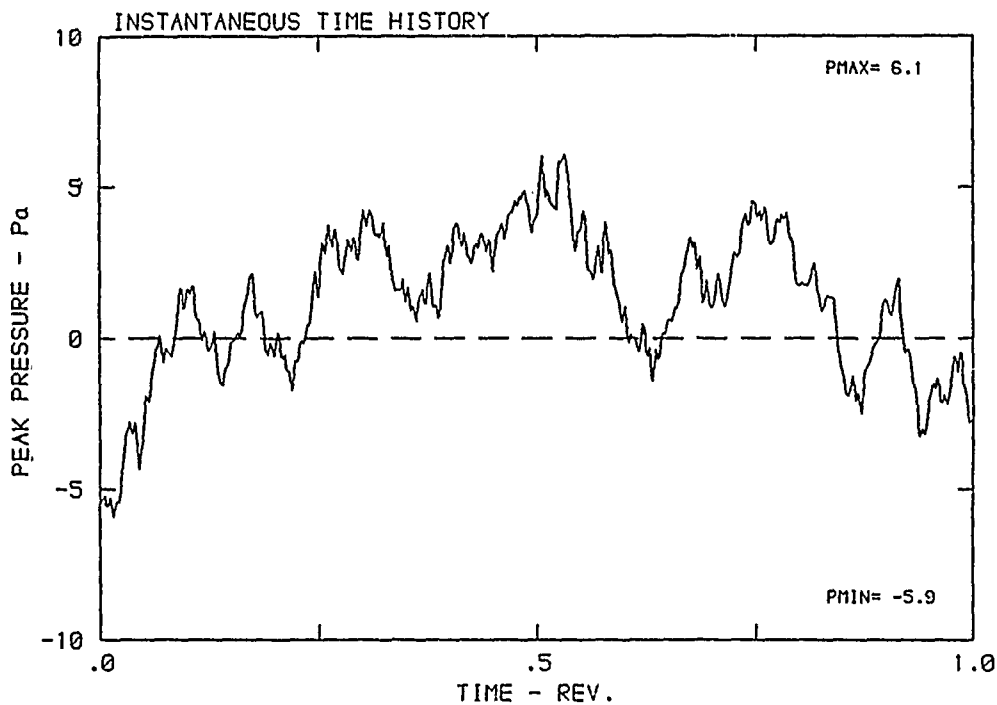
DATA POINT: CN-6    RUN: 102    MP: 3

$\beta$ : 23.7°    MH: .4321    n: 1294 rpm     $v/u$ : .370     $\phi$ : .0°    T: 287.2 K



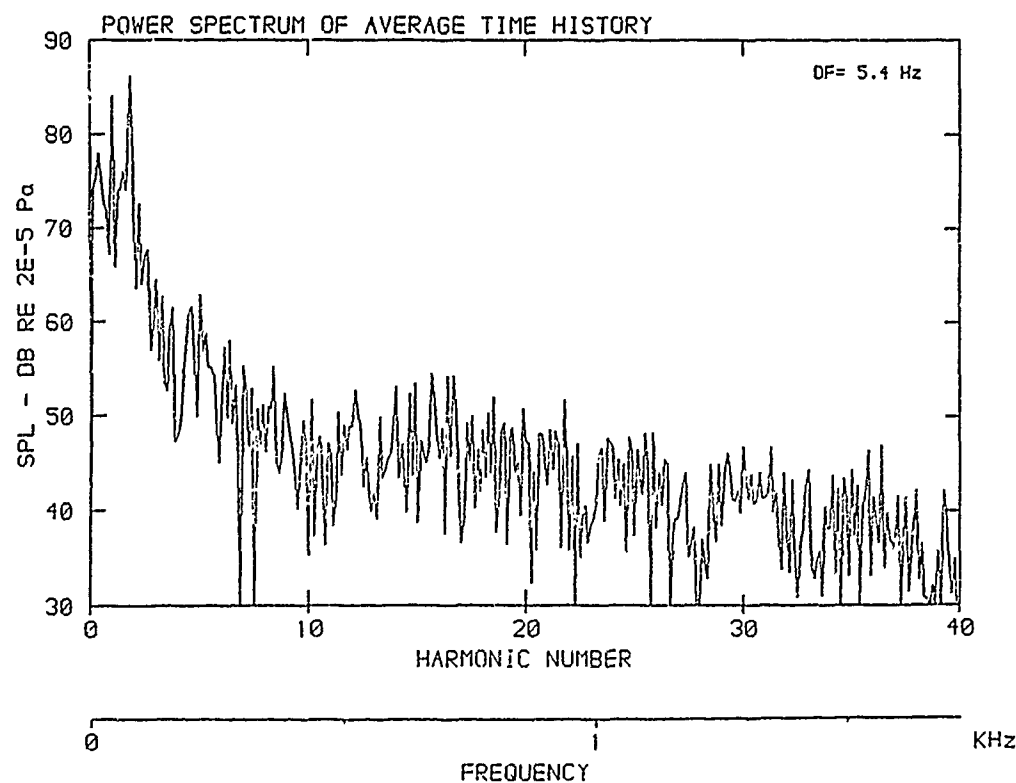
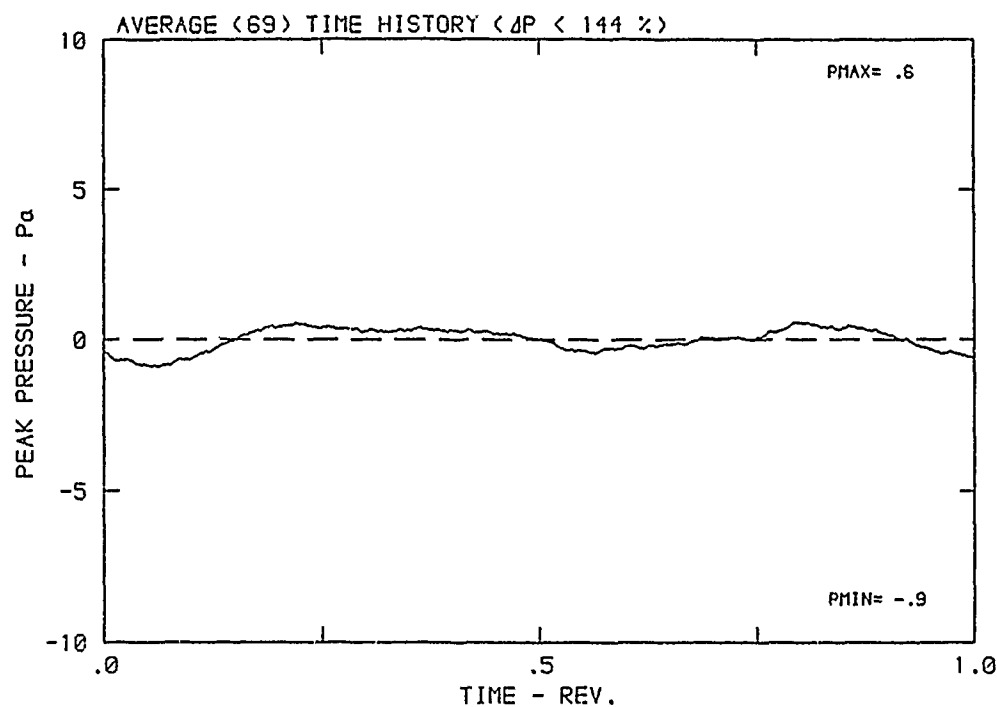
DATA POINT: CN-6 RUN: 102 MP: 4

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



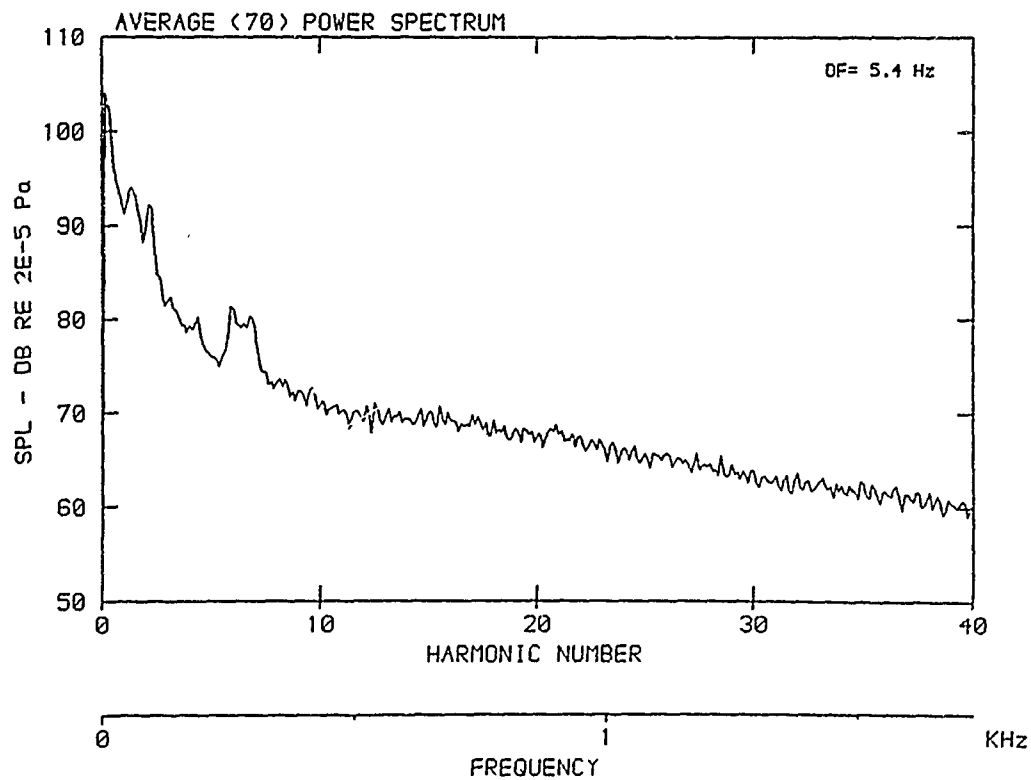
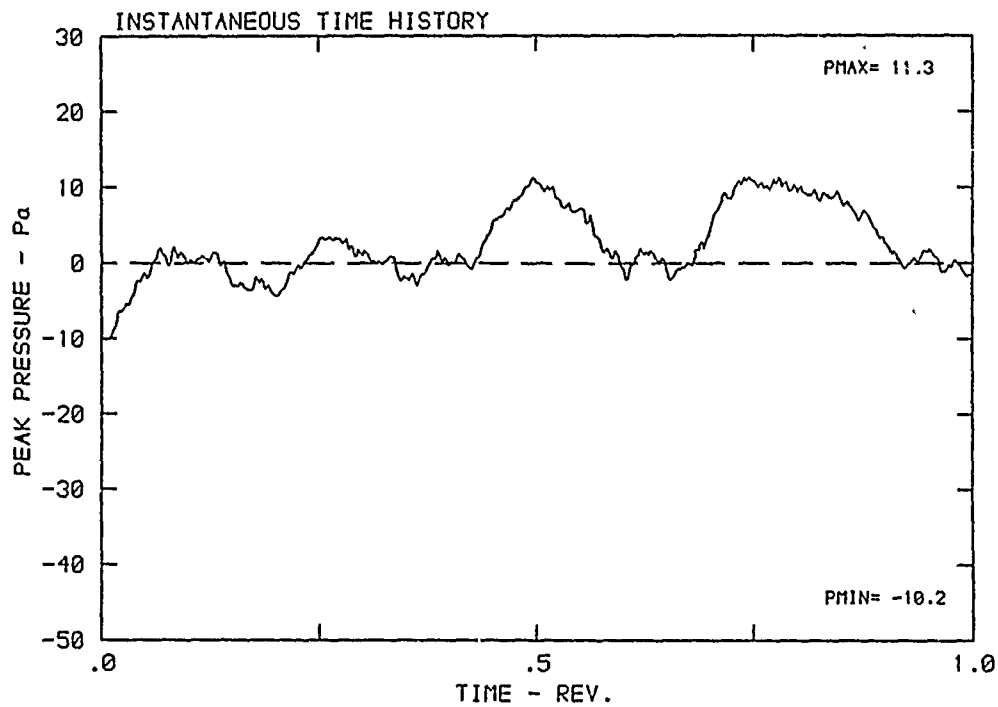
DATA POINT: CN-6 RUN: 102 MP: 4

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



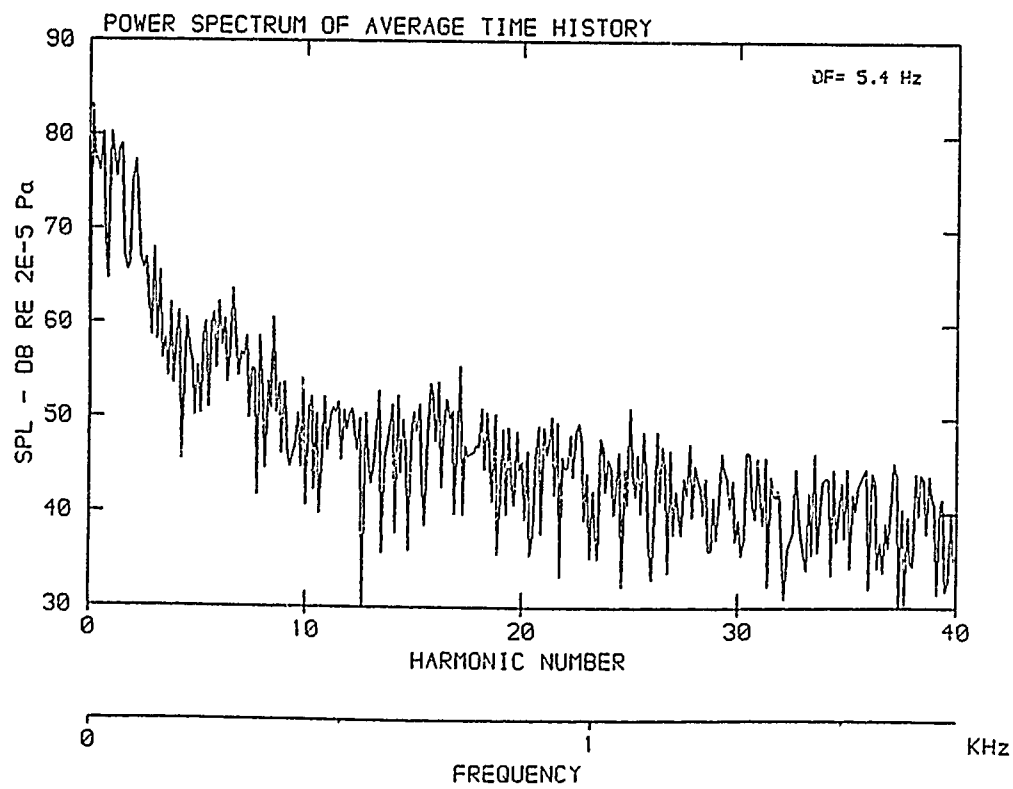
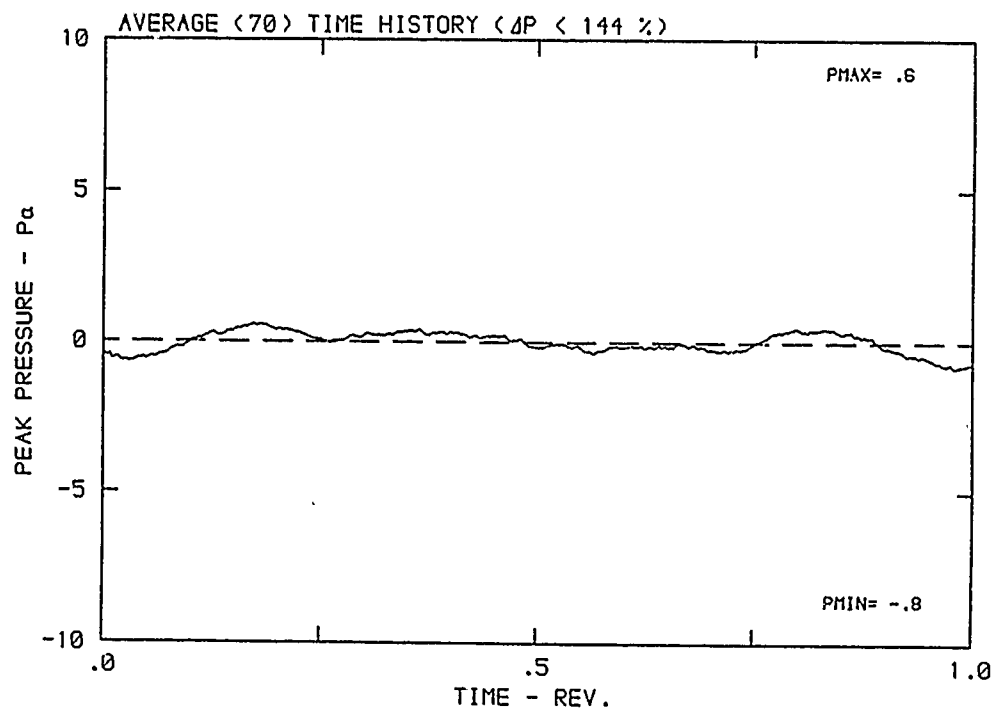
DATA POINT: CN-6 RUN: 102 MP: 5

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



DATA POINT: CN-6      RUN: 102      MP: 5

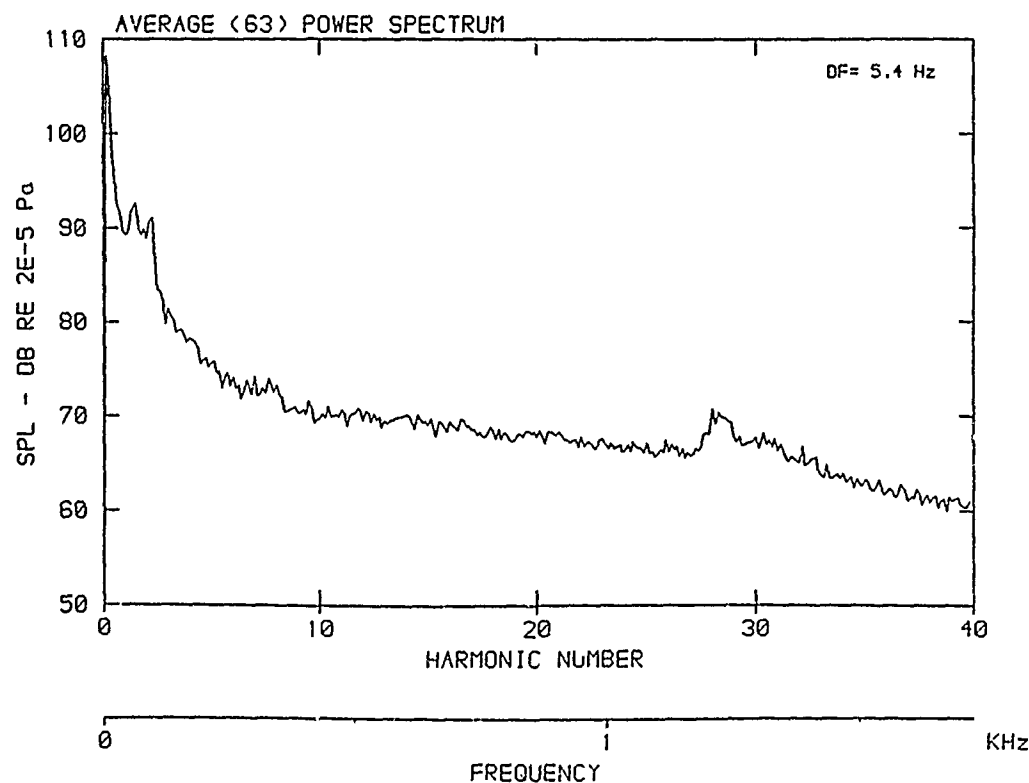
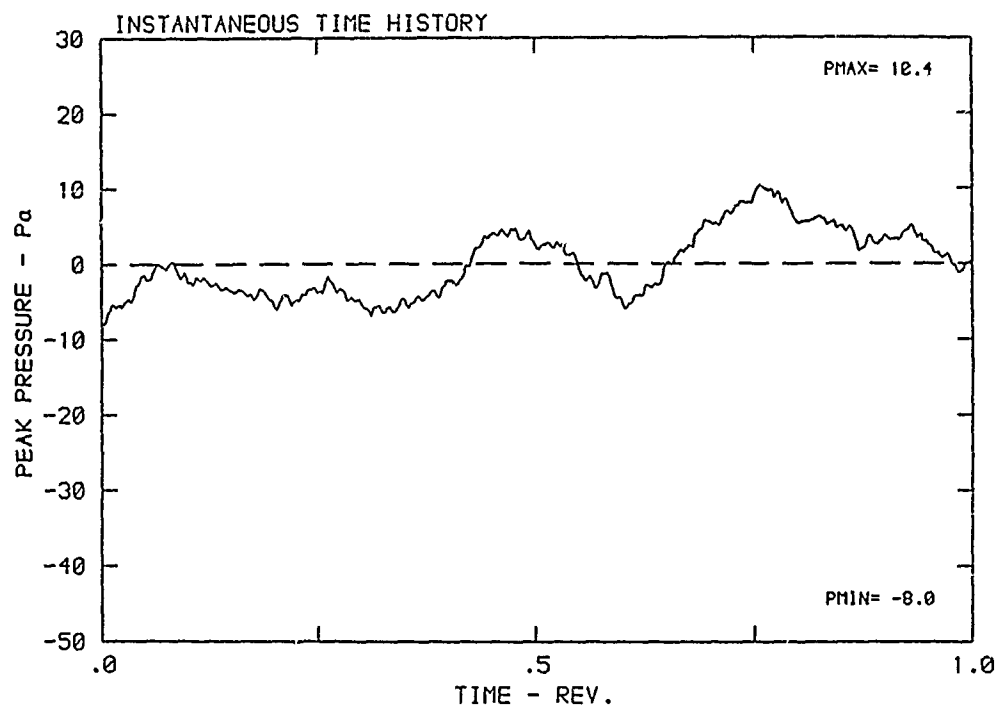
$\beta$ : 23.7°    MH: .4321    n: 1294 rpm    v/u: .370     $\phi$ : .0°    T: 287.2 K



FREQUENCY      KHz

DATA POINT: CN-6 RUN: 102 MP: 6

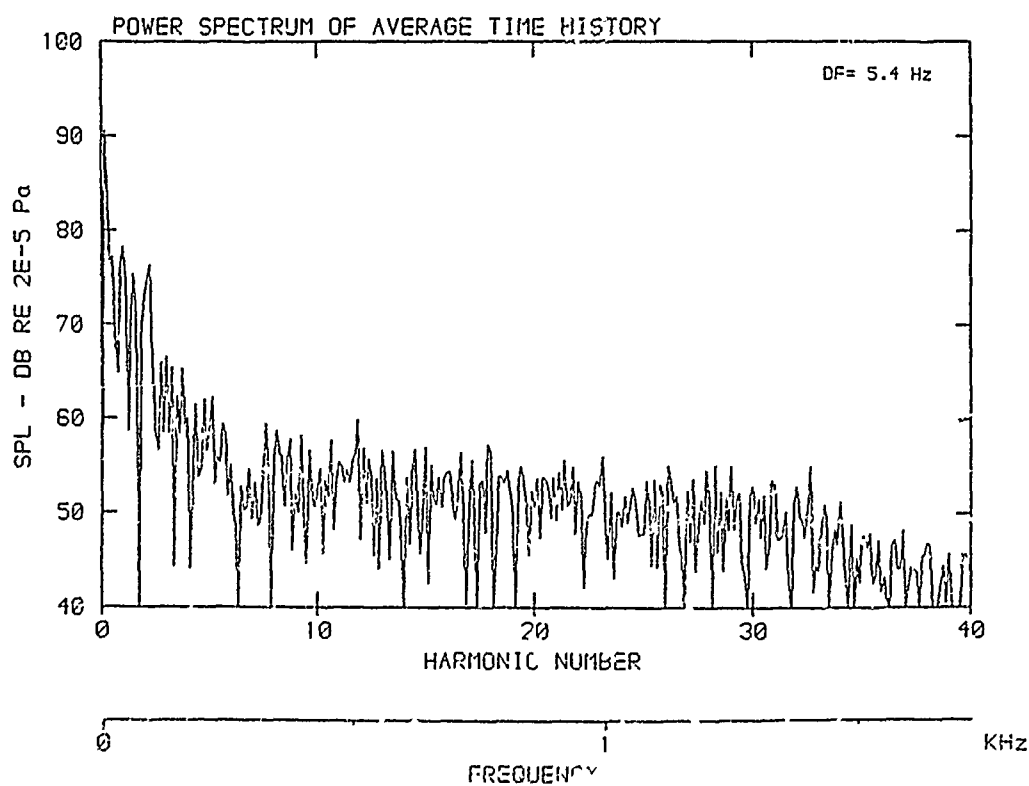
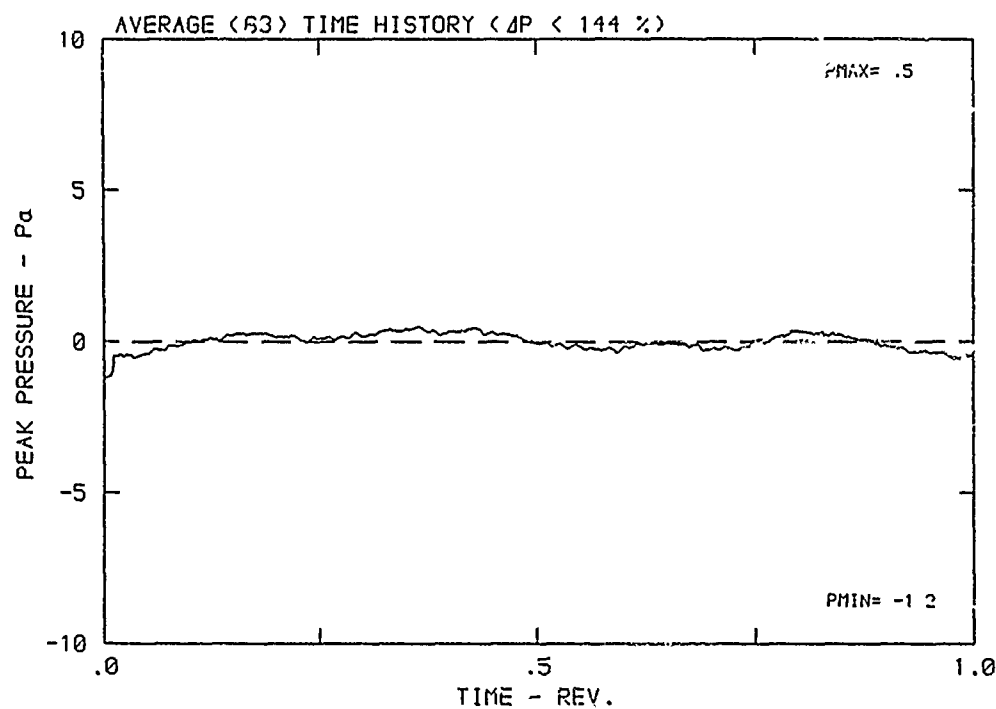
$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K





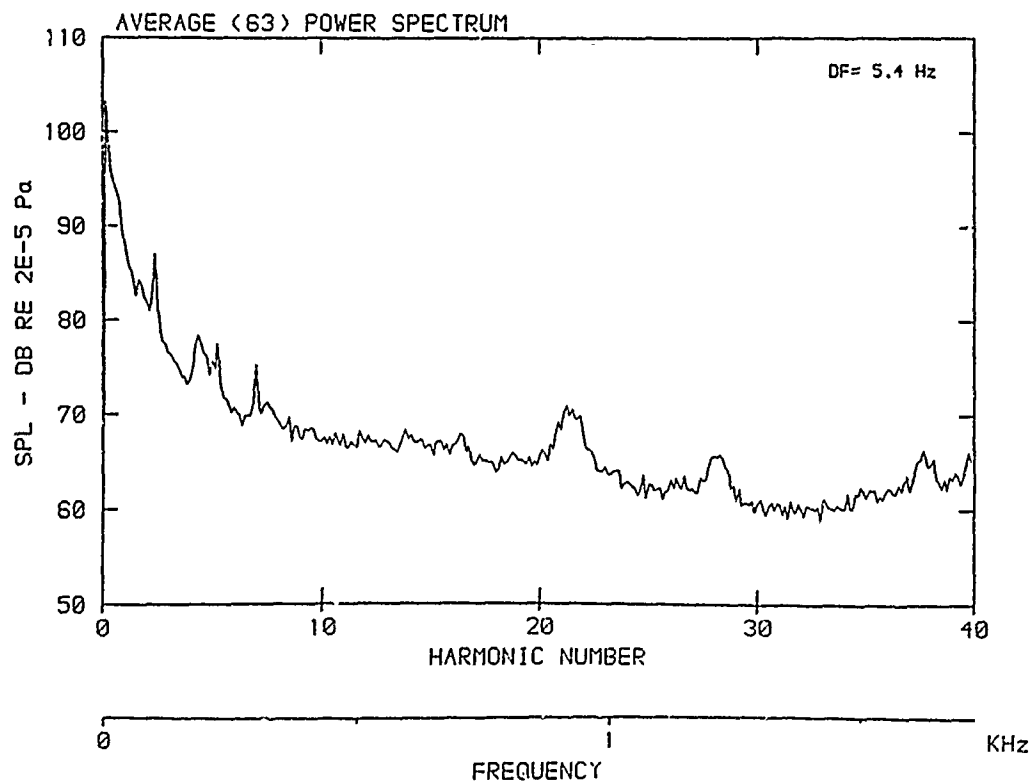
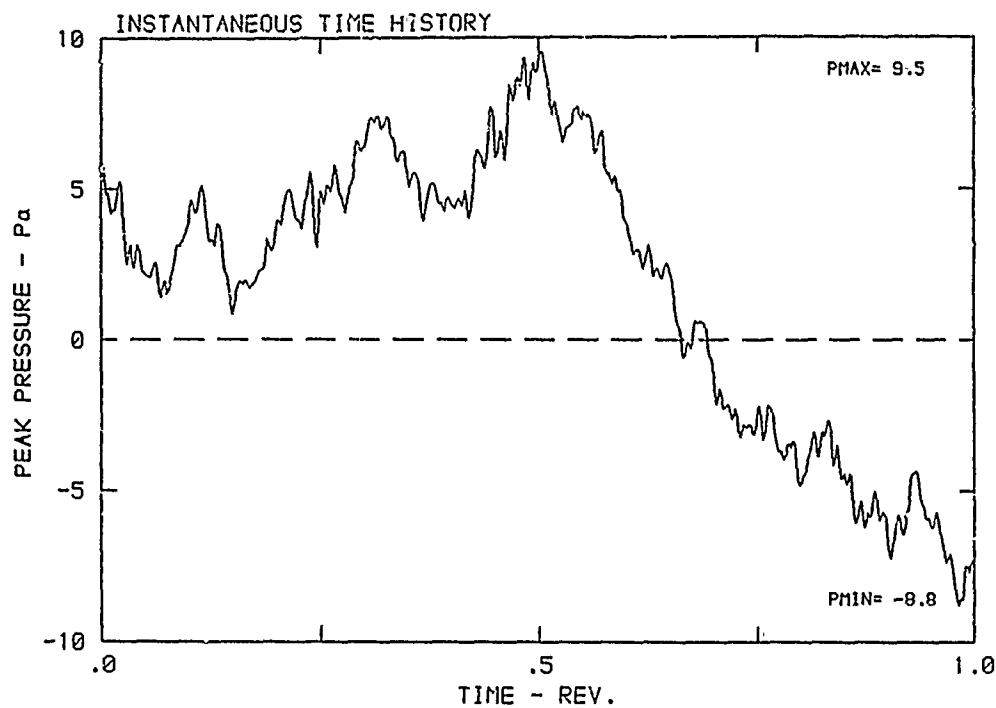
DATA POINT: CN-6 RUN: 102 MP: 6

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 k



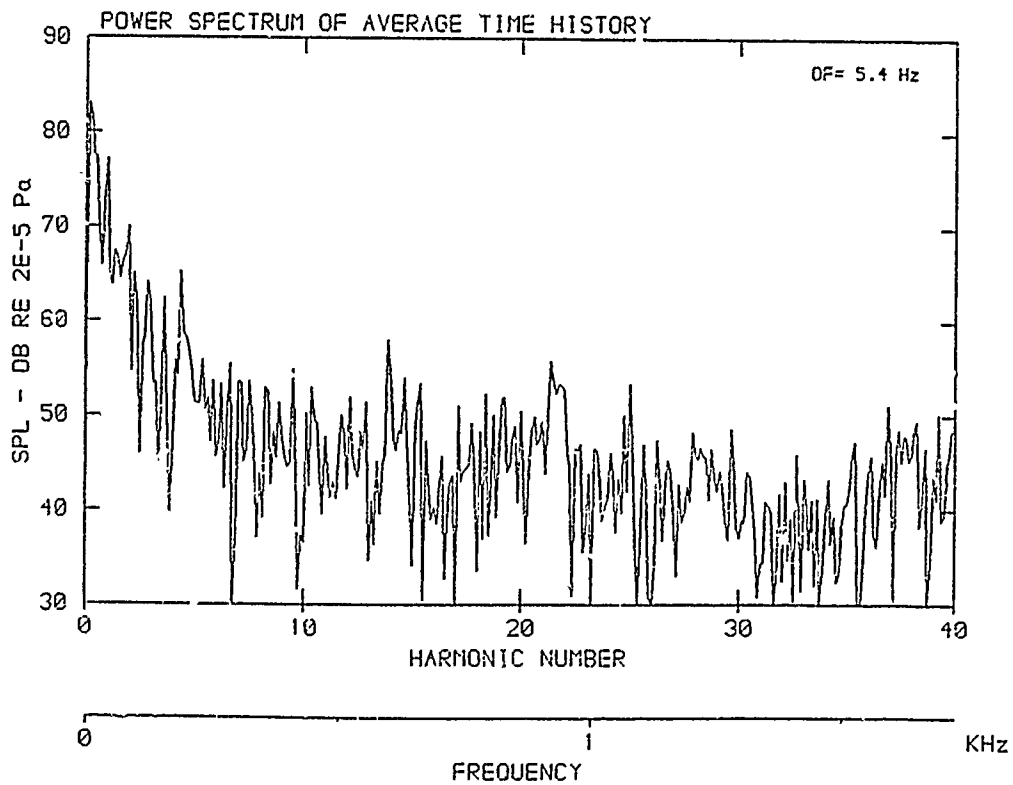
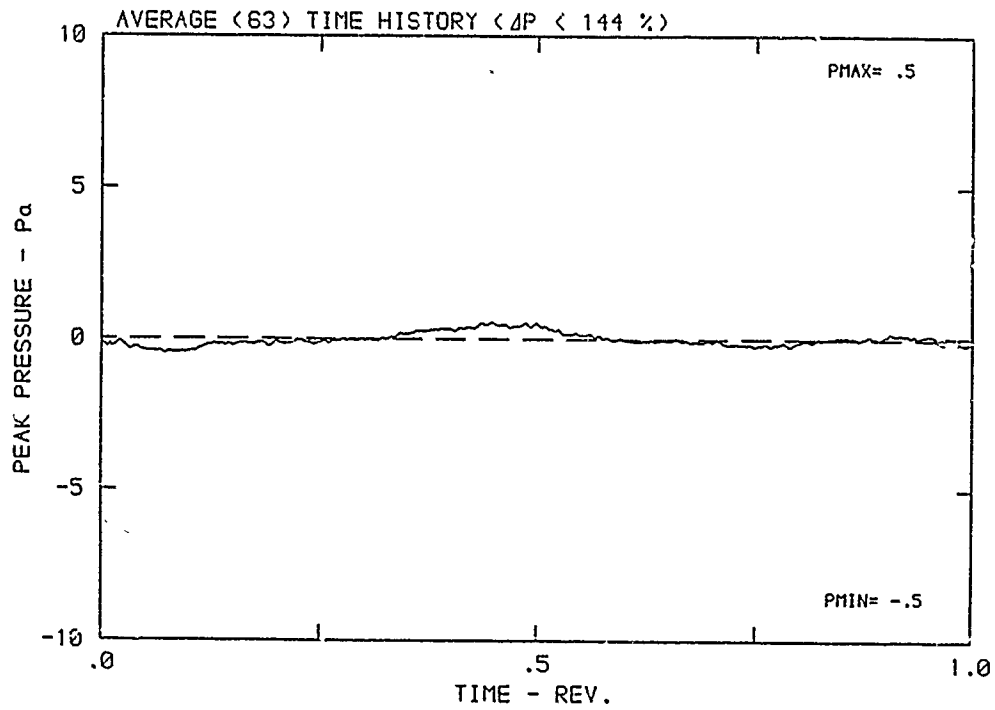
DATA POINT: CN-6 RUN: 102 MP: 7

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



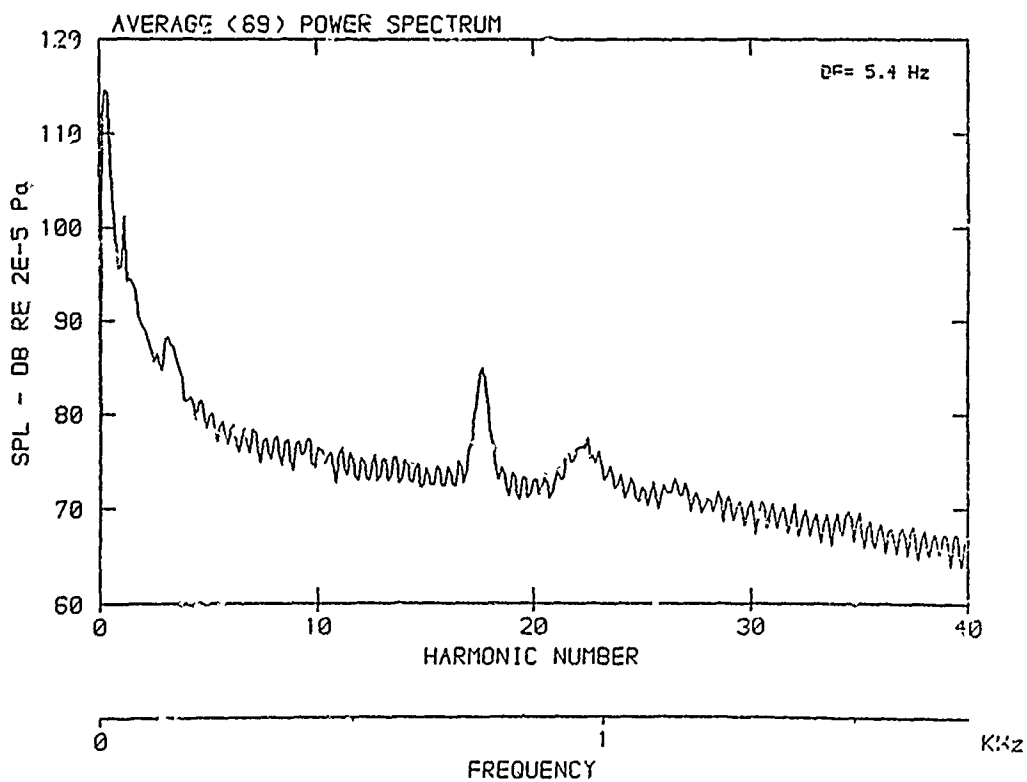
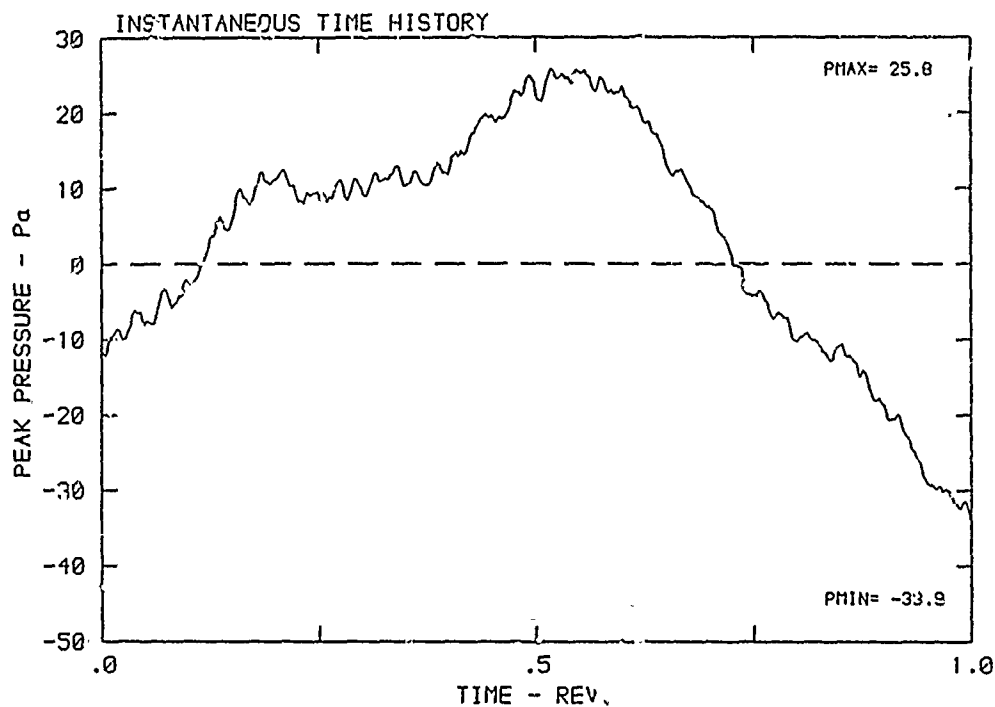
DATA POINT: CN-6 RUN: 102 MP: 7

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



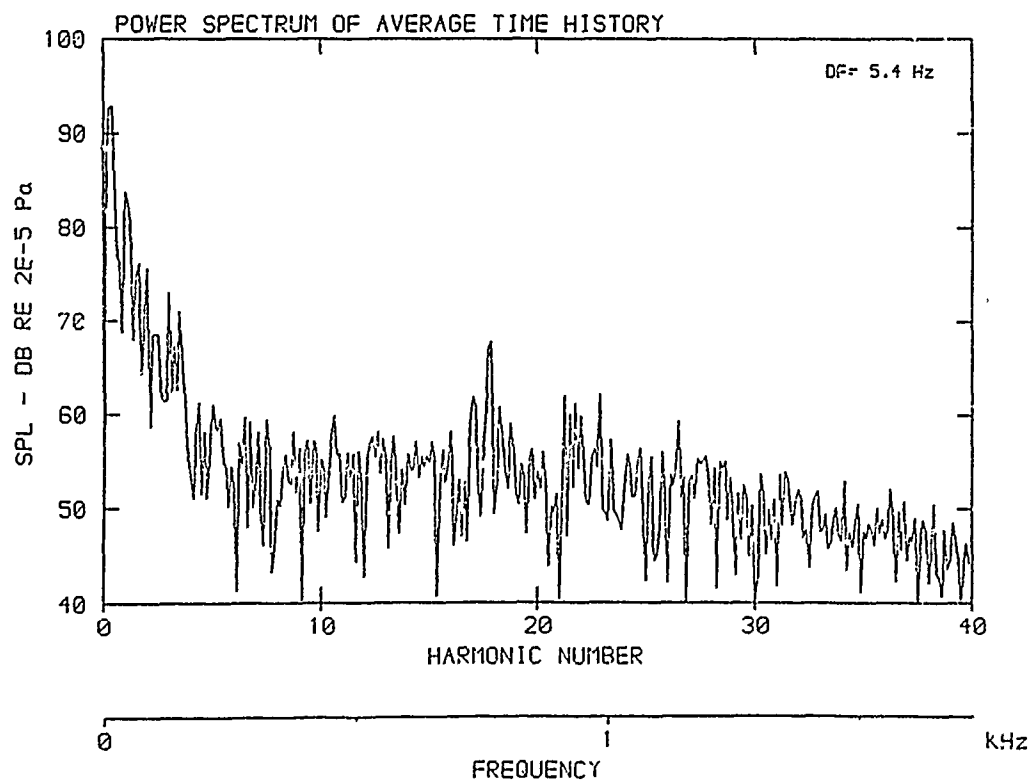
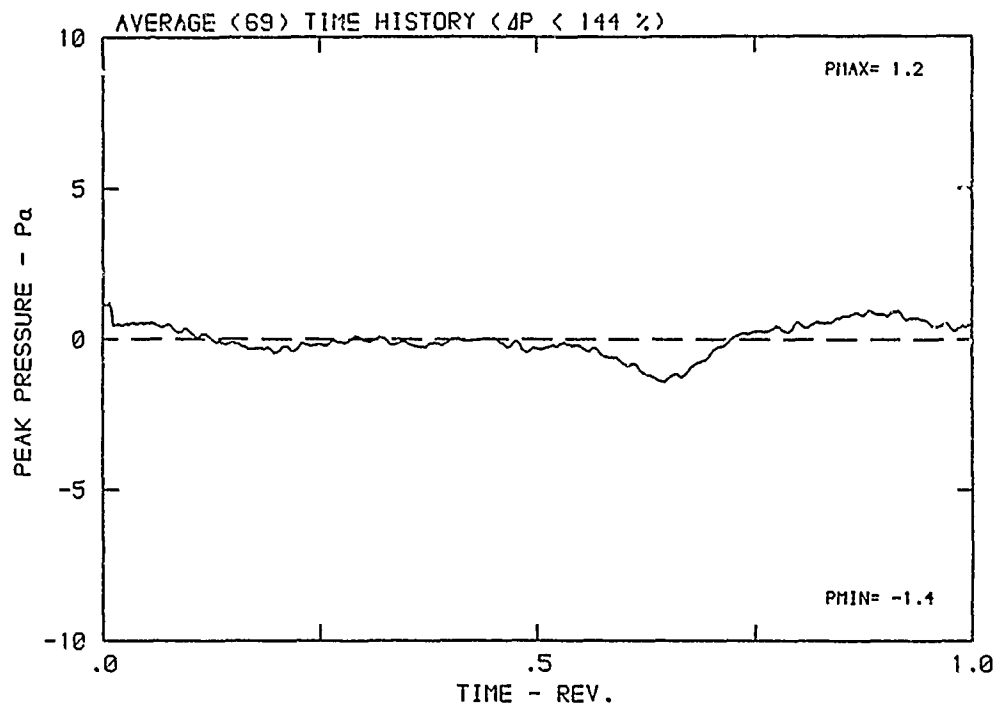
DATA POINT: CN-6 RUN: 102 MP: 9

$\beta$ : 23.7° MH: .432 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



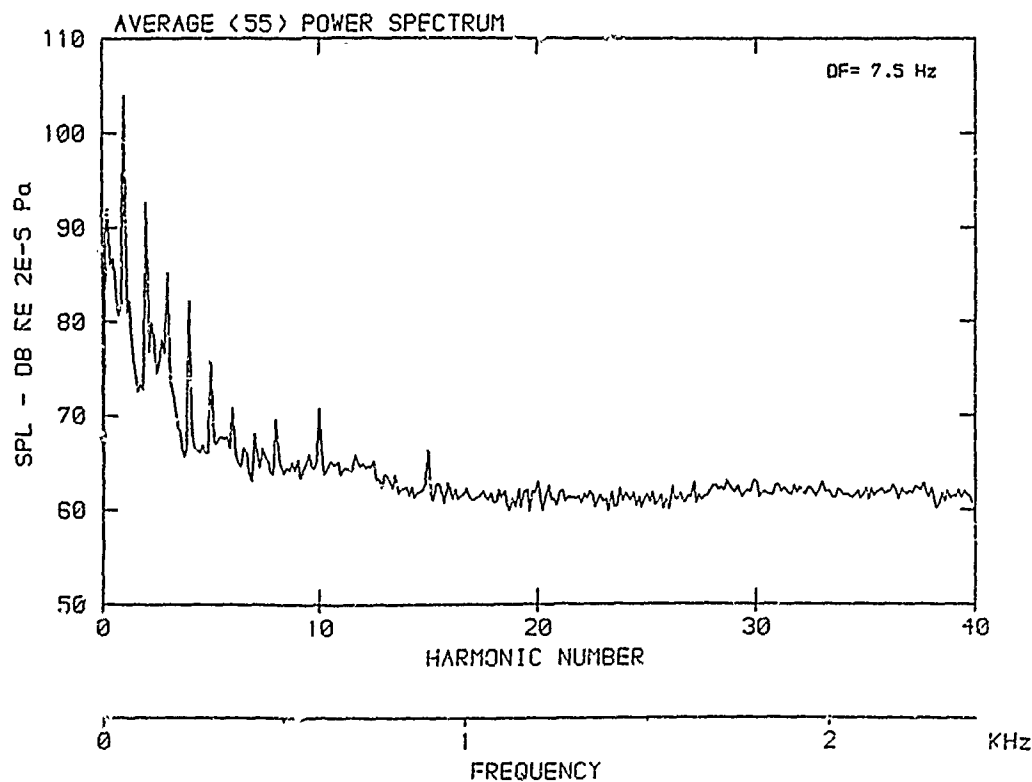
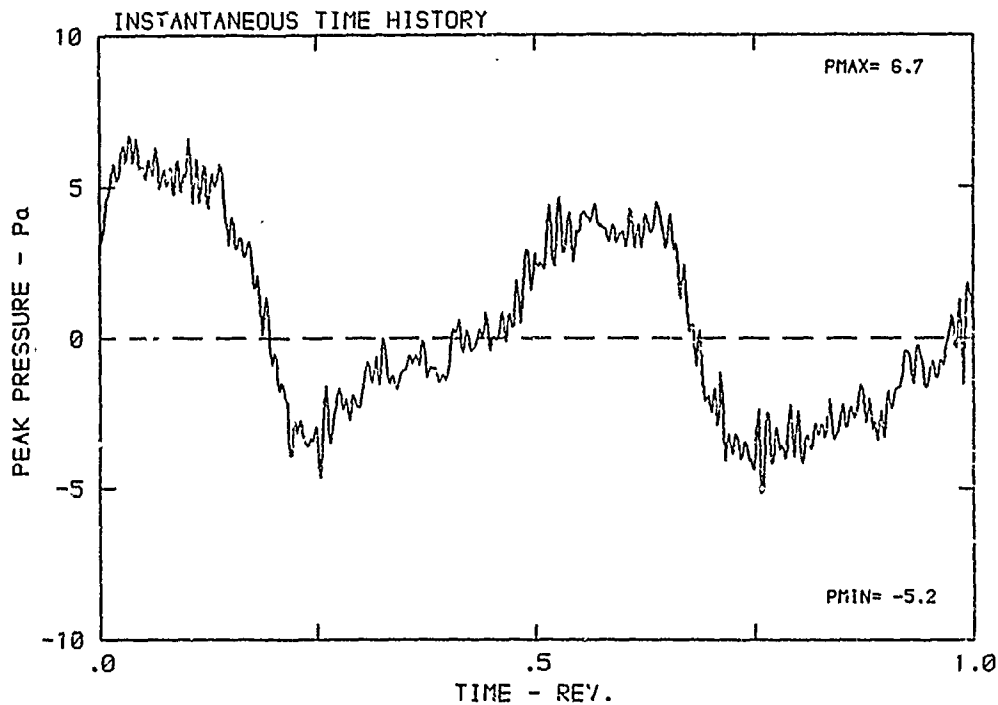
DATA POINT: CN-6 RUN: 102 MP: 9

$\beta$ : 23.7° MH: .4321 n: 1294 rpm v/u: .370  $\phi$ : .0° T: 287.2 K



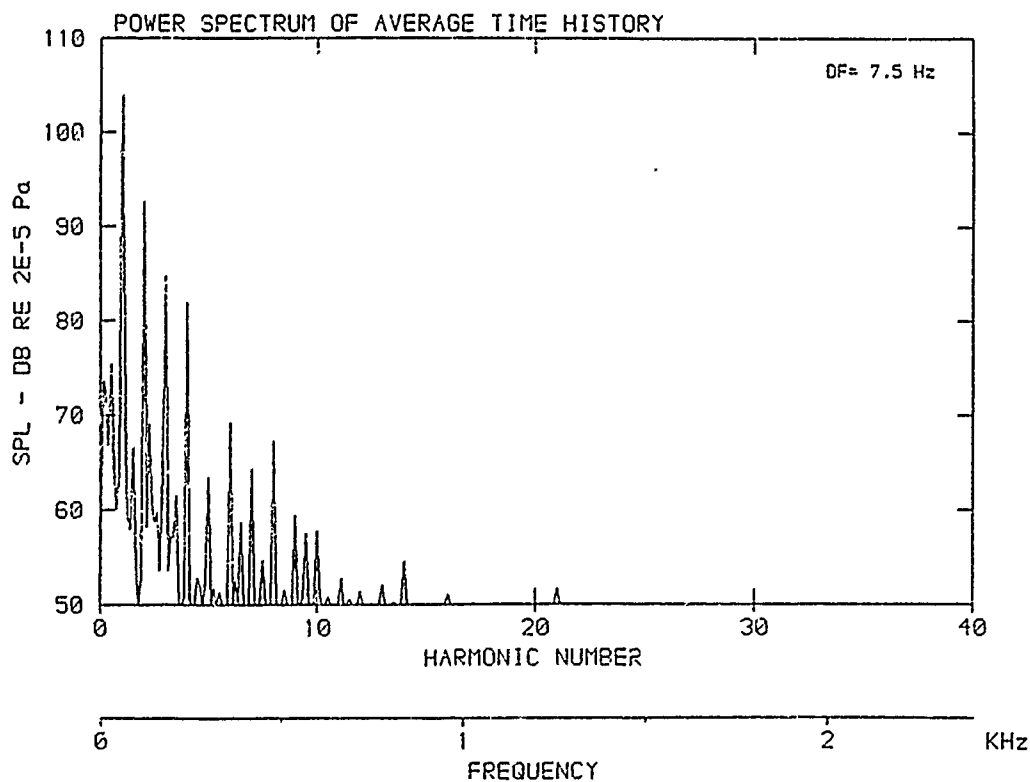
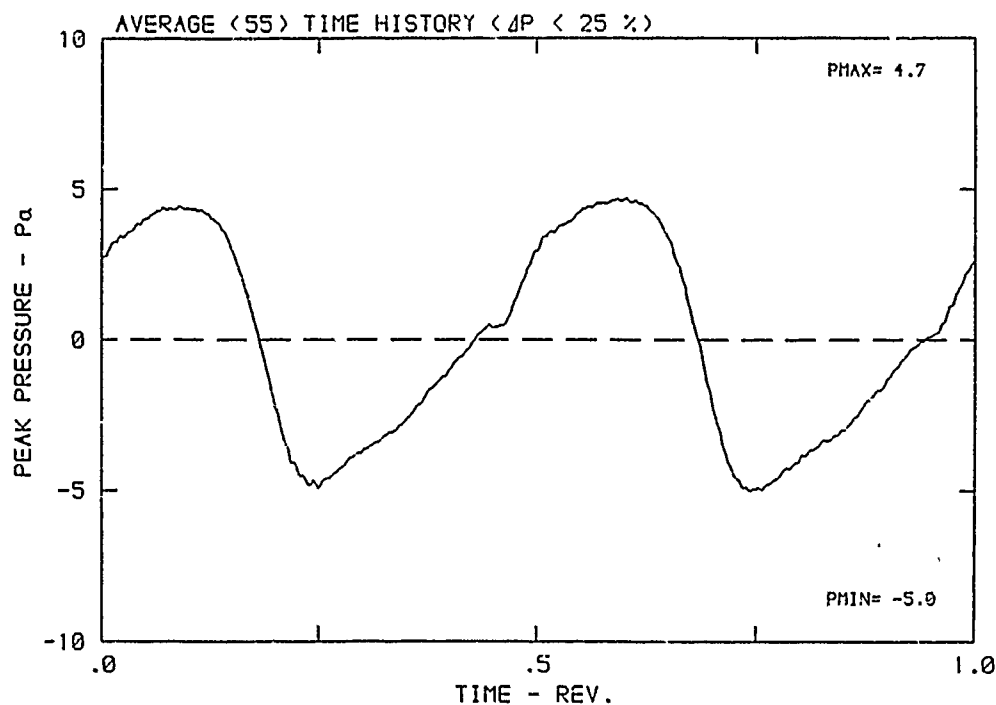
DATA POINT: DN-1 RUN: 97 MP: 1

$\beta$ : 29.0° MH: .5785 n: 1800 rpm  $v/u$ : .229  $\phi$ : .0° T: 287.0 K



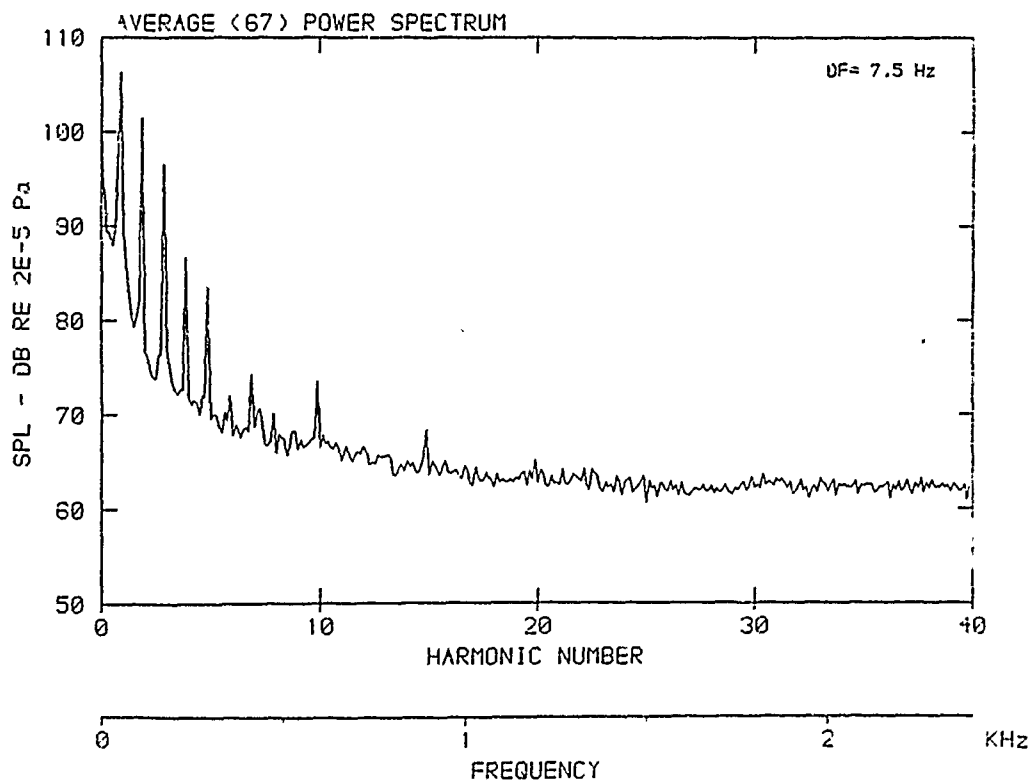
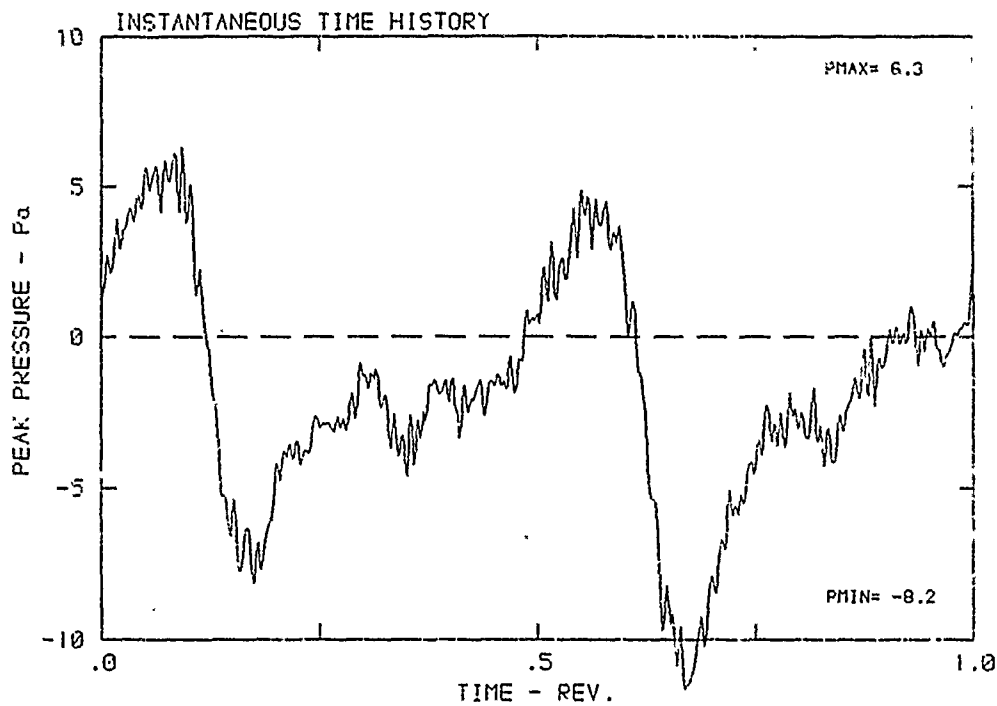
DATA POINT: DN-1      RUN: 97      MP: 1

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm    v/u: .229     $\phi$ : .0°    T: 287.0 K



DATA POINT: DN-1 RUN: 97 MP: 1.1

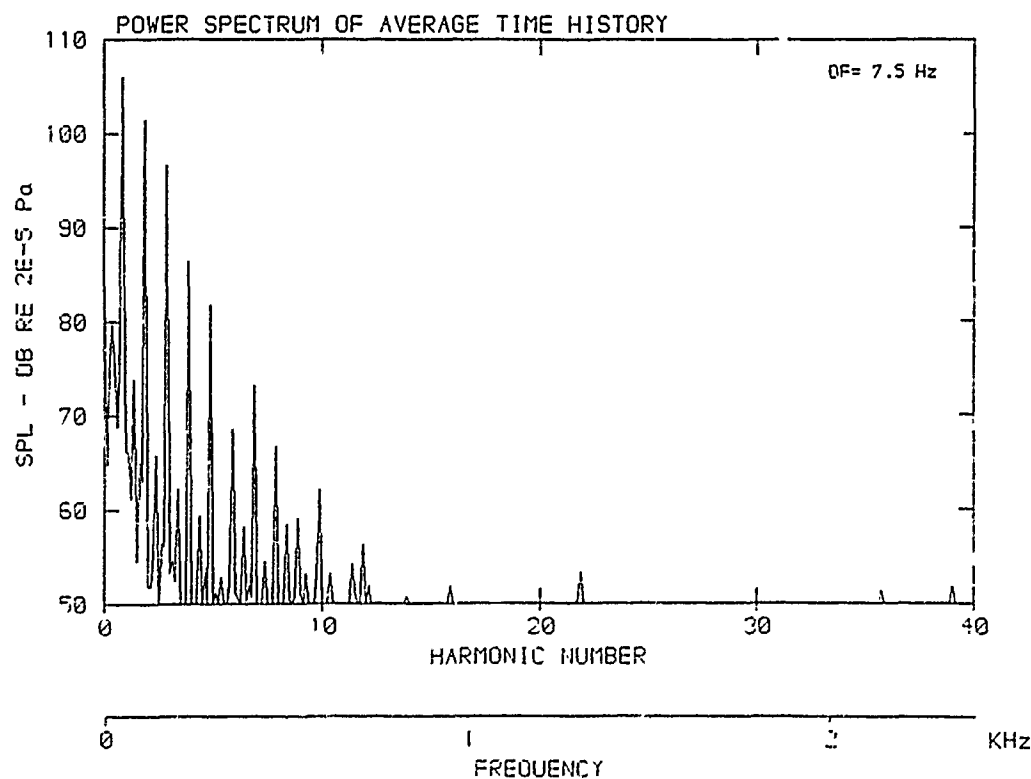
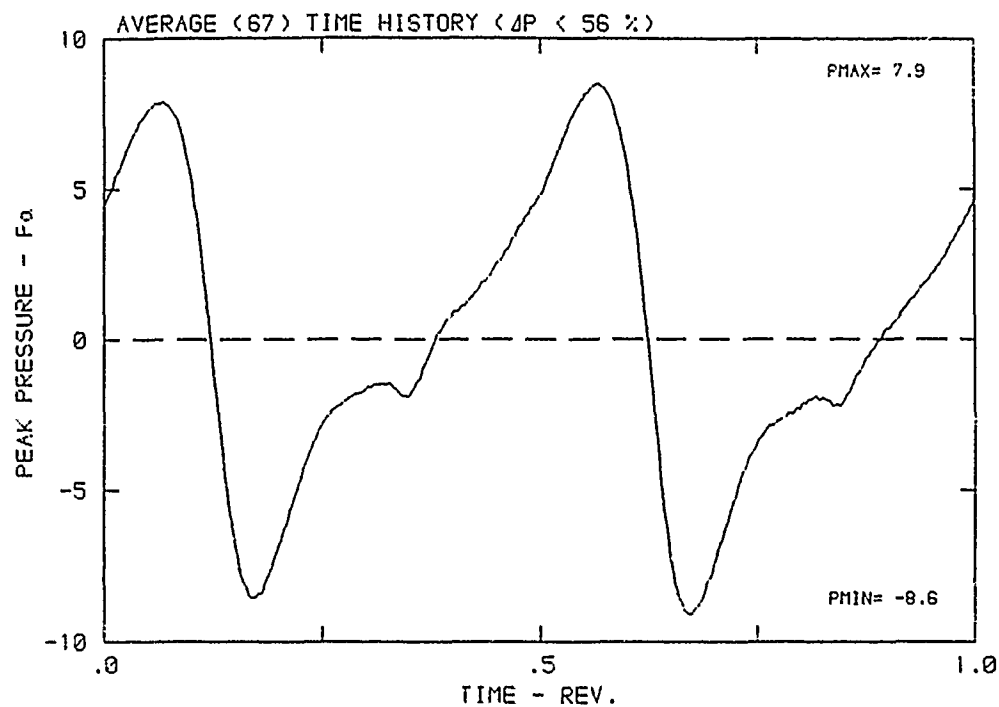
$\beta$ : 29.0° MH: .5785 n: 1800 rpm  $v/u$ : .223  $\phi$ : .0° T: 237.2





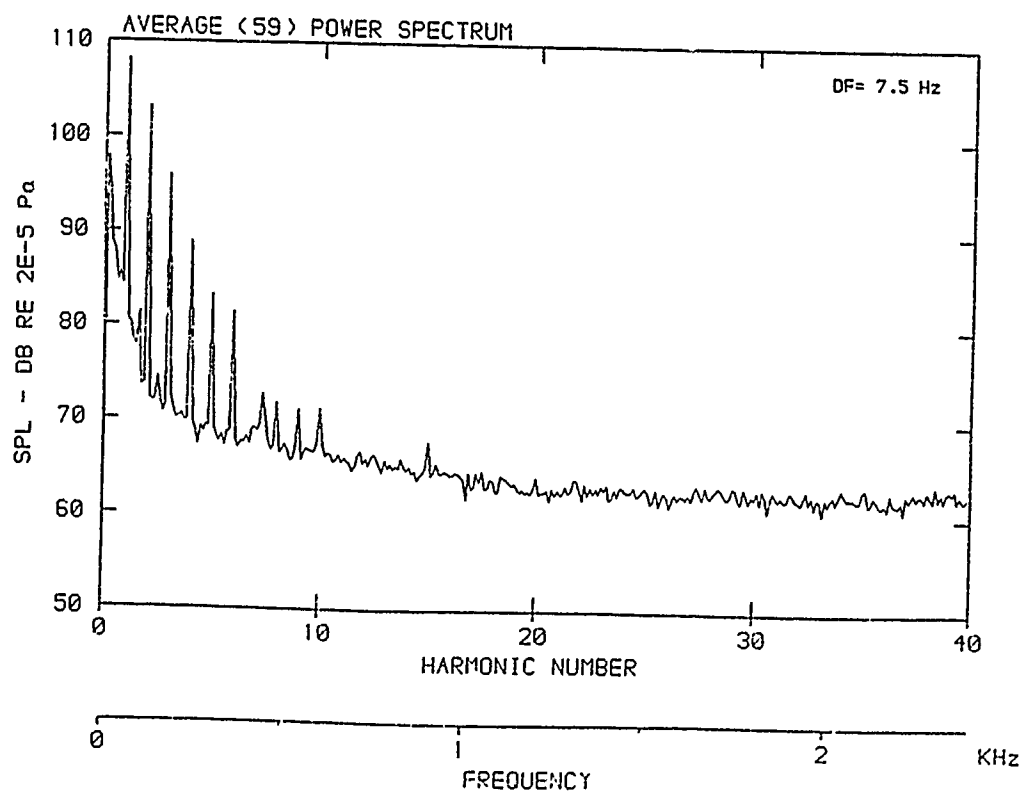
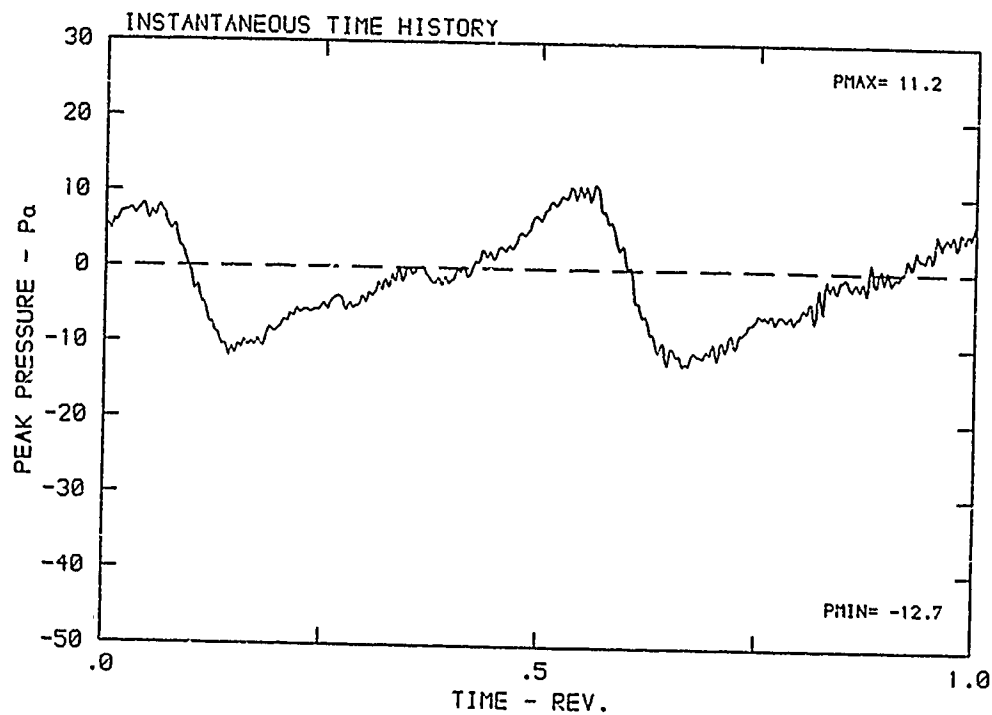
DATA POINT: DN-1      RUN: 97      MP: 2

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm    v/u: .229     $\phi$ : .0°    T: 287.0 K



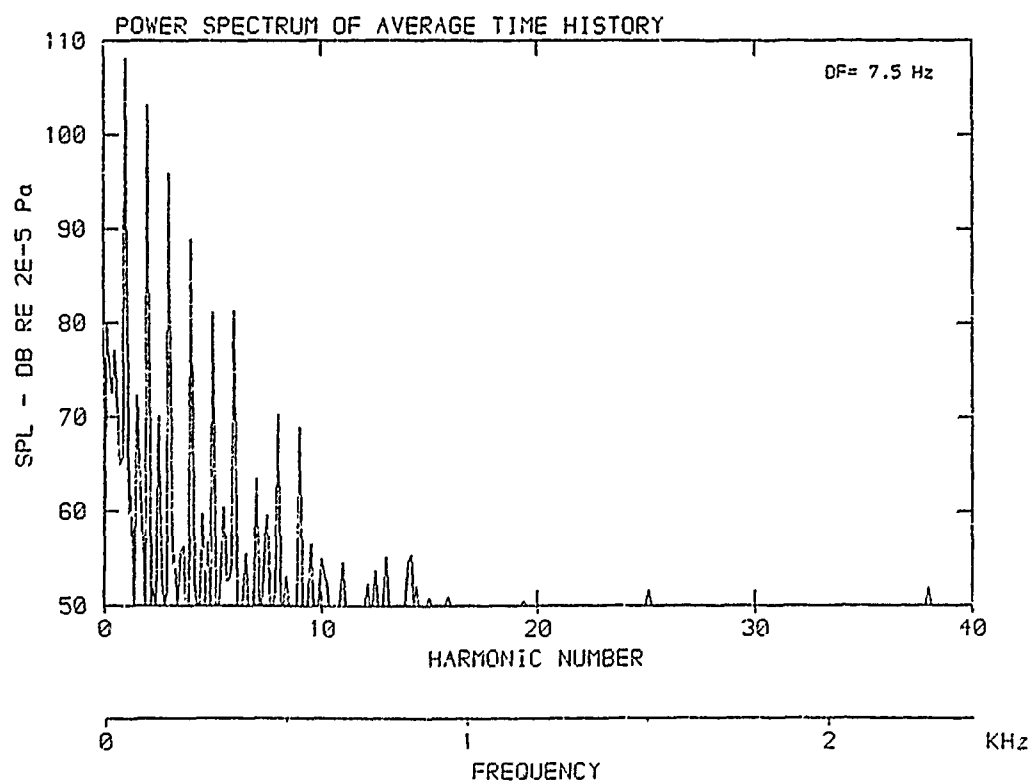
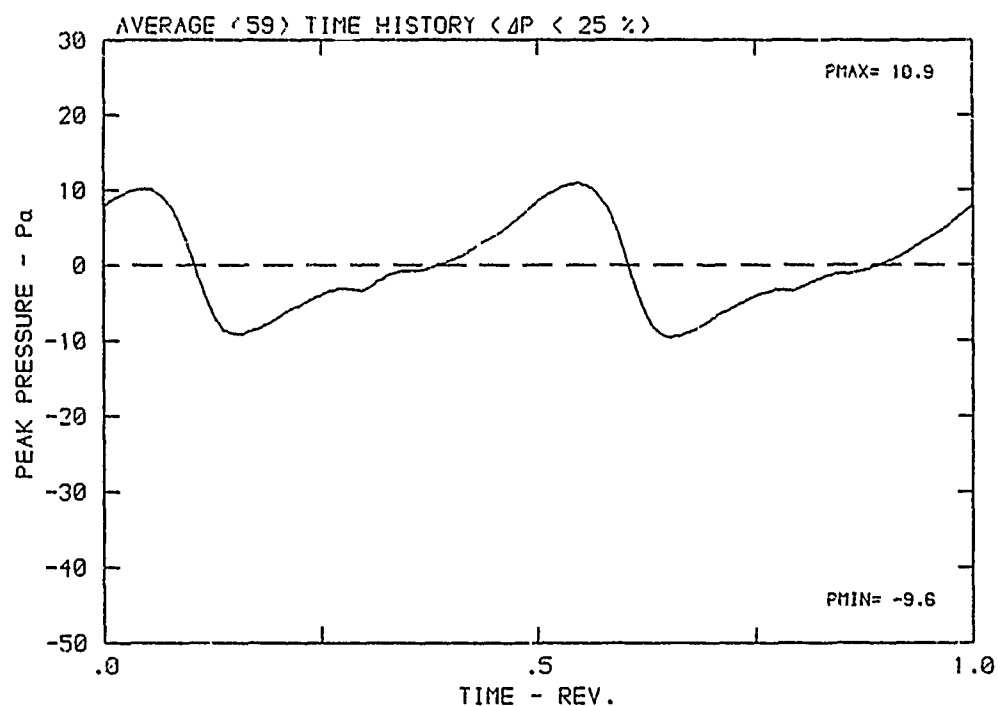
DATA POINT: DN-1    RUN: 97    MP: 3

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm     $v/u$ : .229     $\phi$ : .0°    T: 287.0 K



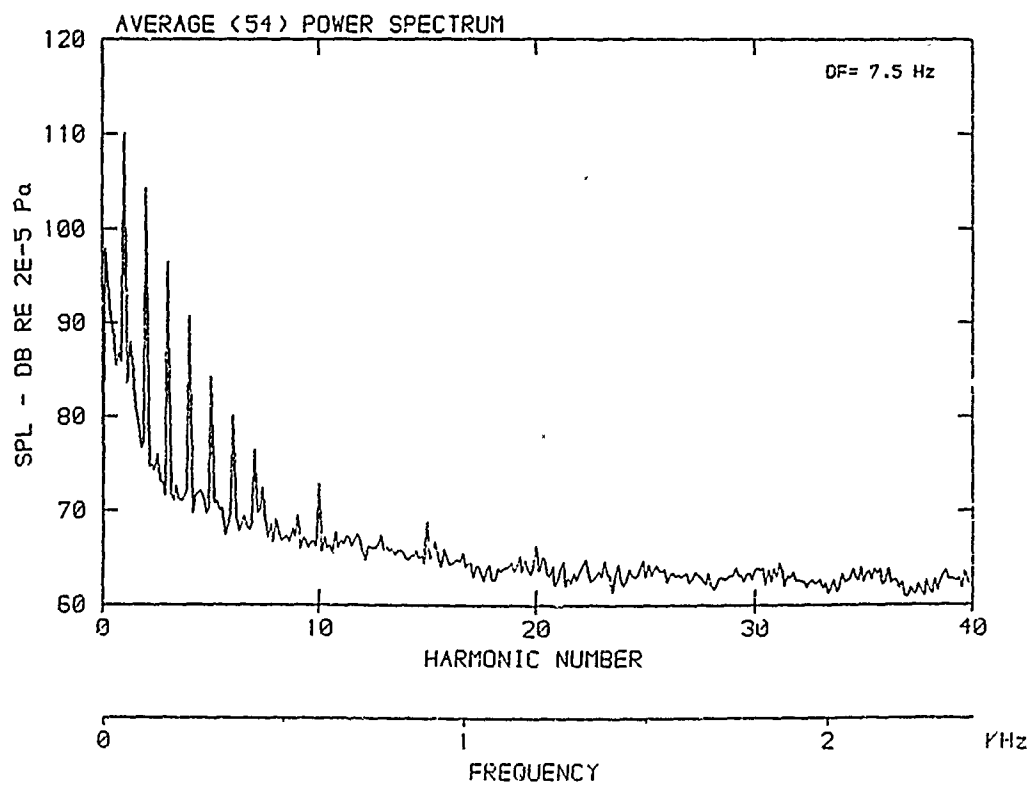
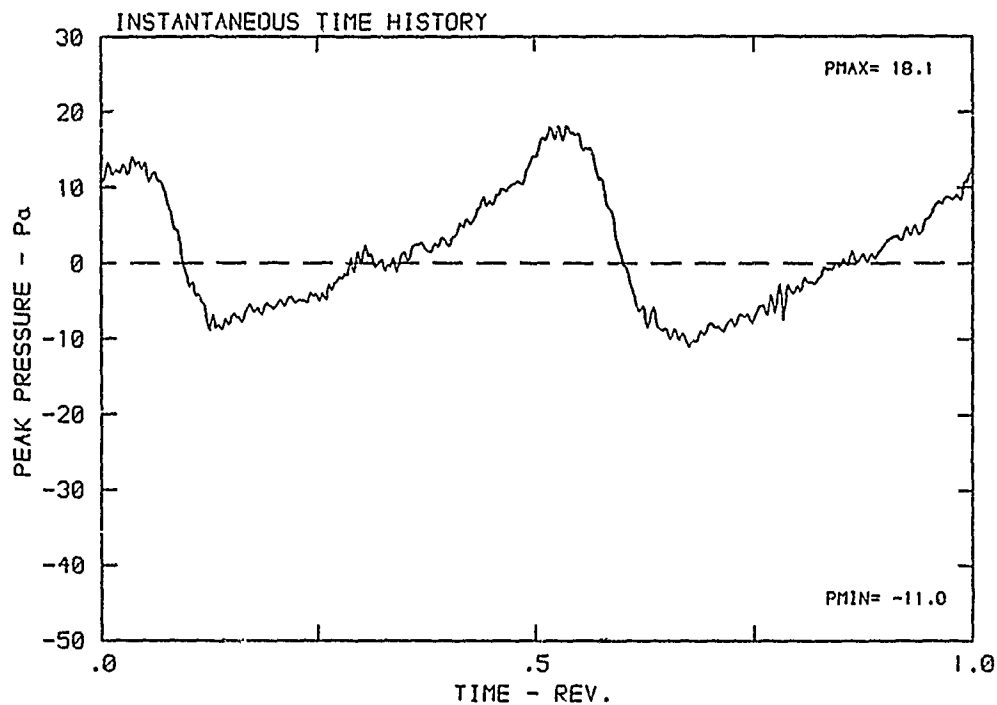
DATA POINT: DN-1 RUN: 97 MP: 3

$\beta$ : 29.0° MH: .5785 n: 1800 rpm v/u: .229  $\phi$ : .0° T: 287.0 K



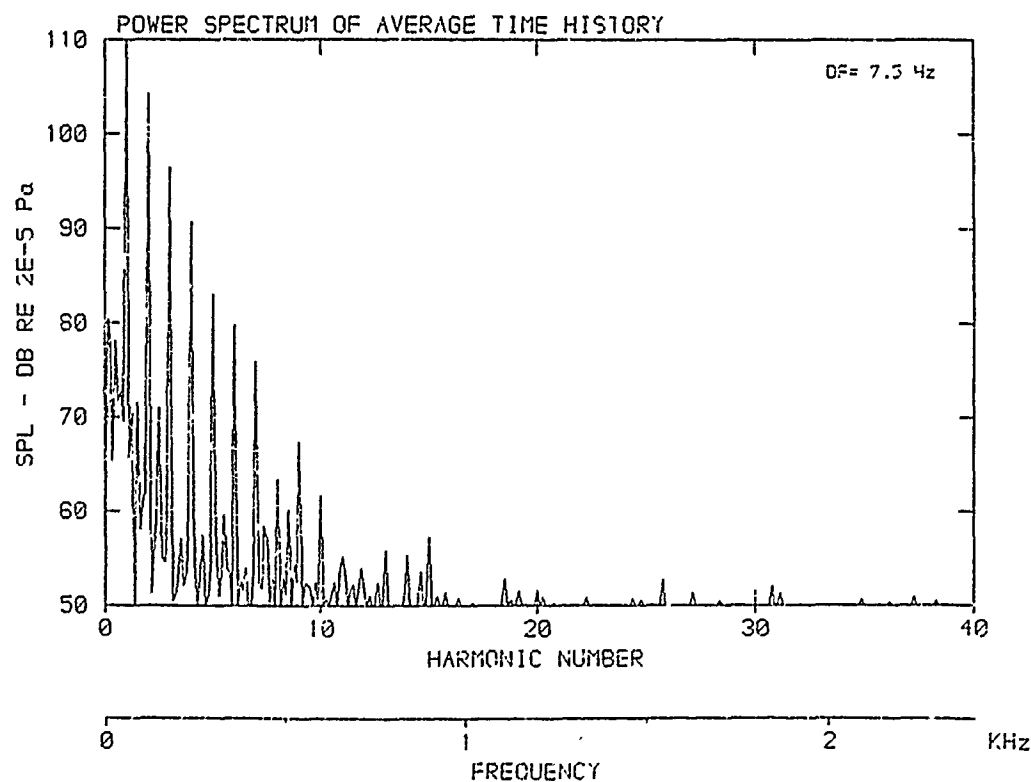
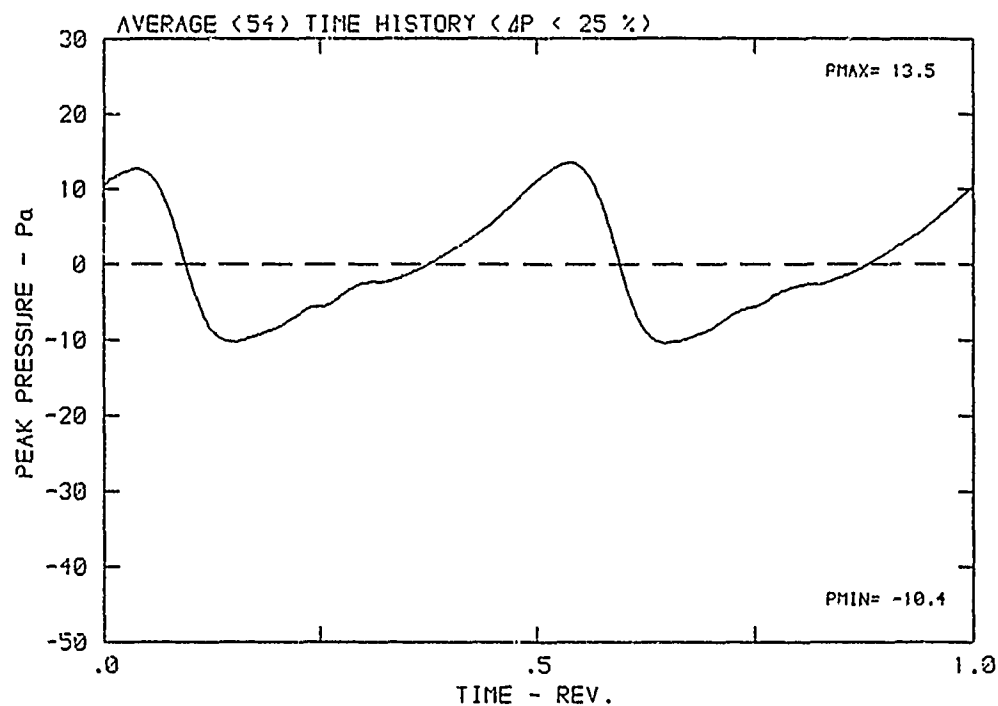
DATA POINT: DN--1    RUN: 97    MP: 4

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm    v/u: .229     $\phi$ : .0°    T: 287.0 K



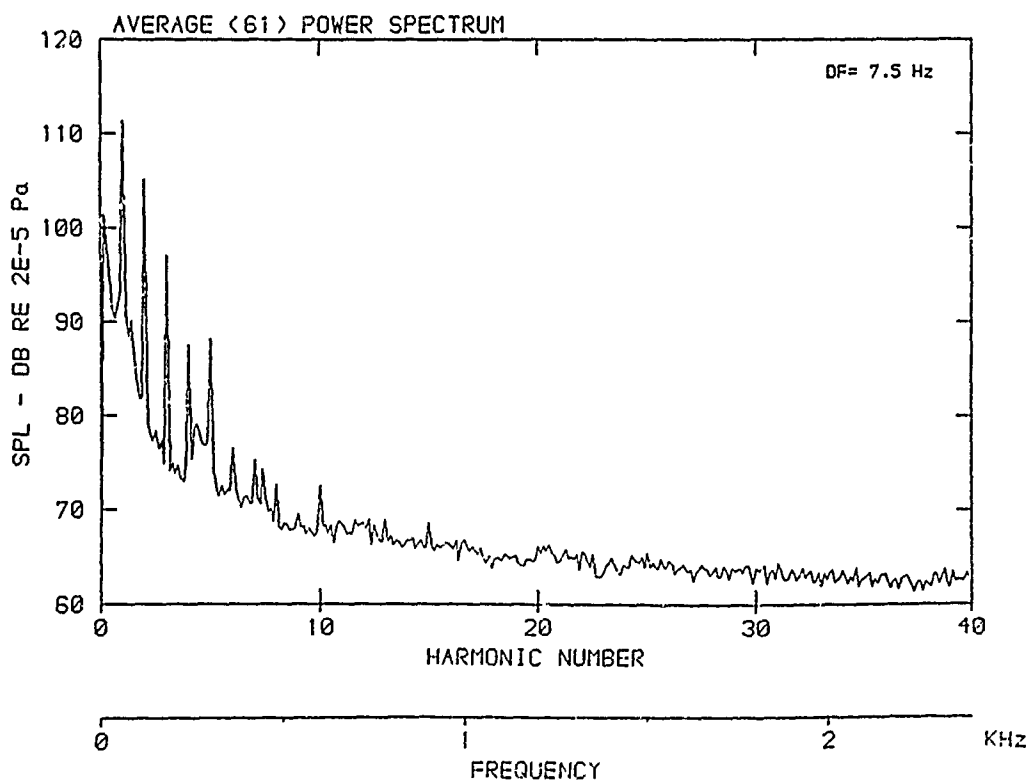
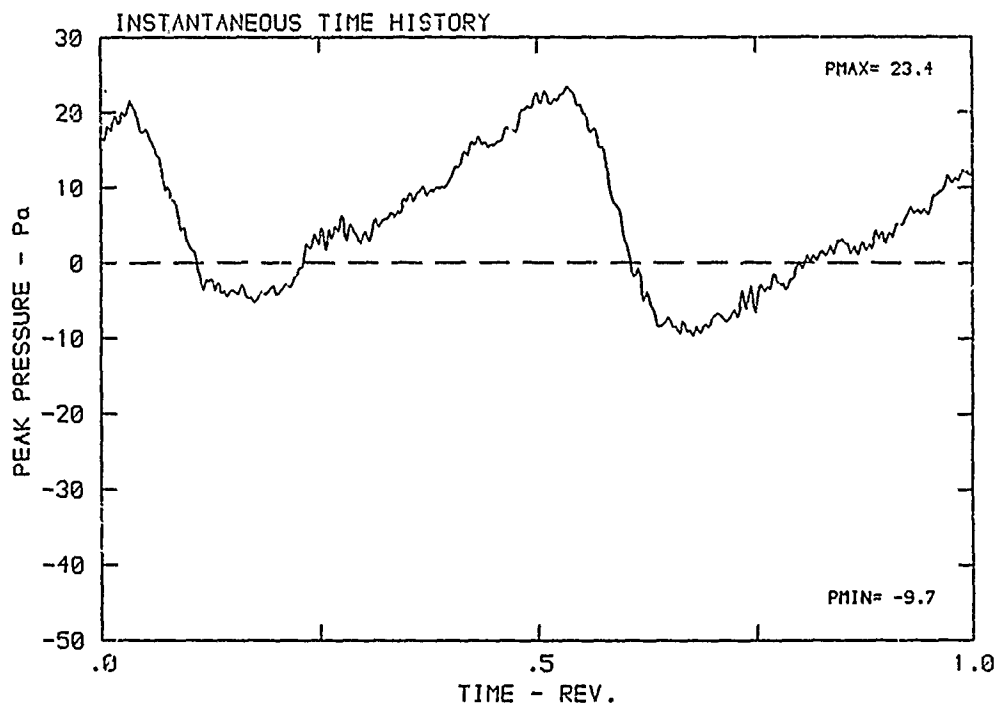
DATA POINT: DN-1 RUN: 97 MP: 4

$\beta$ : 29.0° MH: .5785 n: 1800 rpm  $v/u$ : .229  $\phi$ : .0° T: 287.0 K



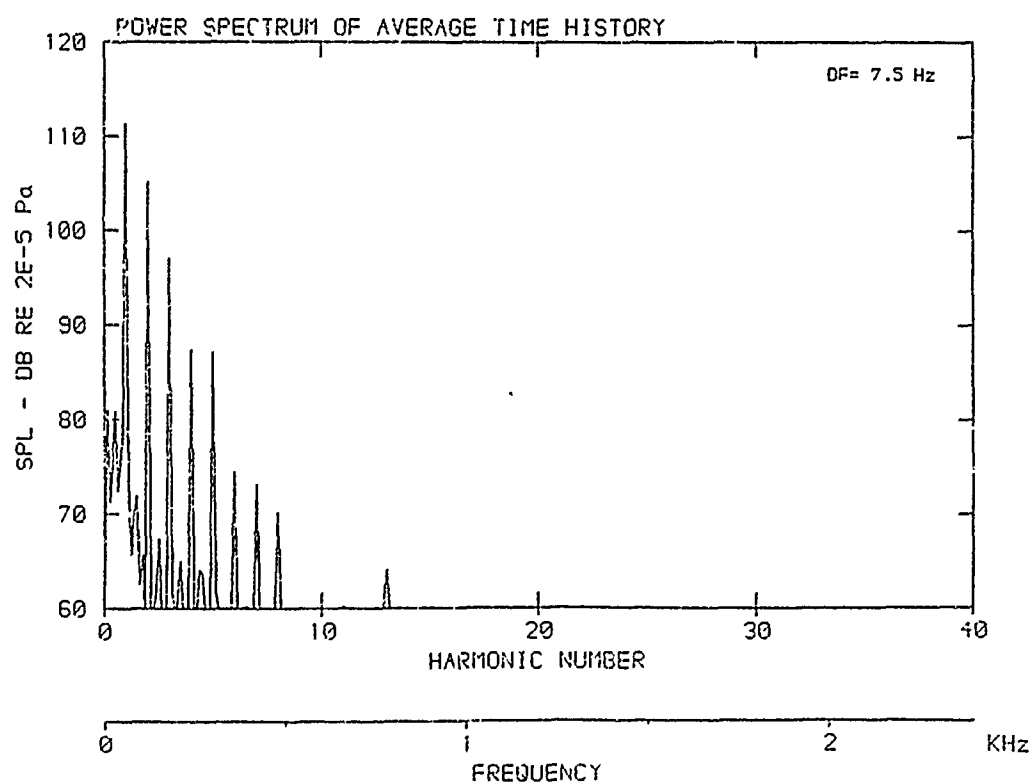
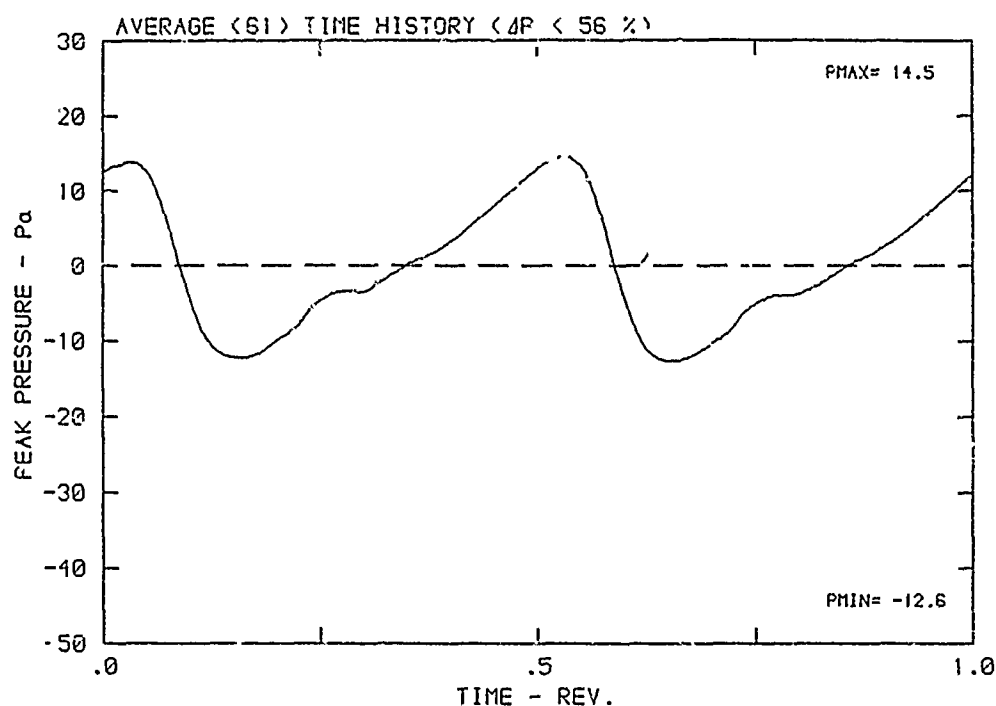
DATA POINT: DN-1 RUN: 97 MP: 5

$\beta$ : 29.0° MH: .5785 n: 1800 rpm  $v/u$ : .229  $\phi$ : .0° T: 287.0 K



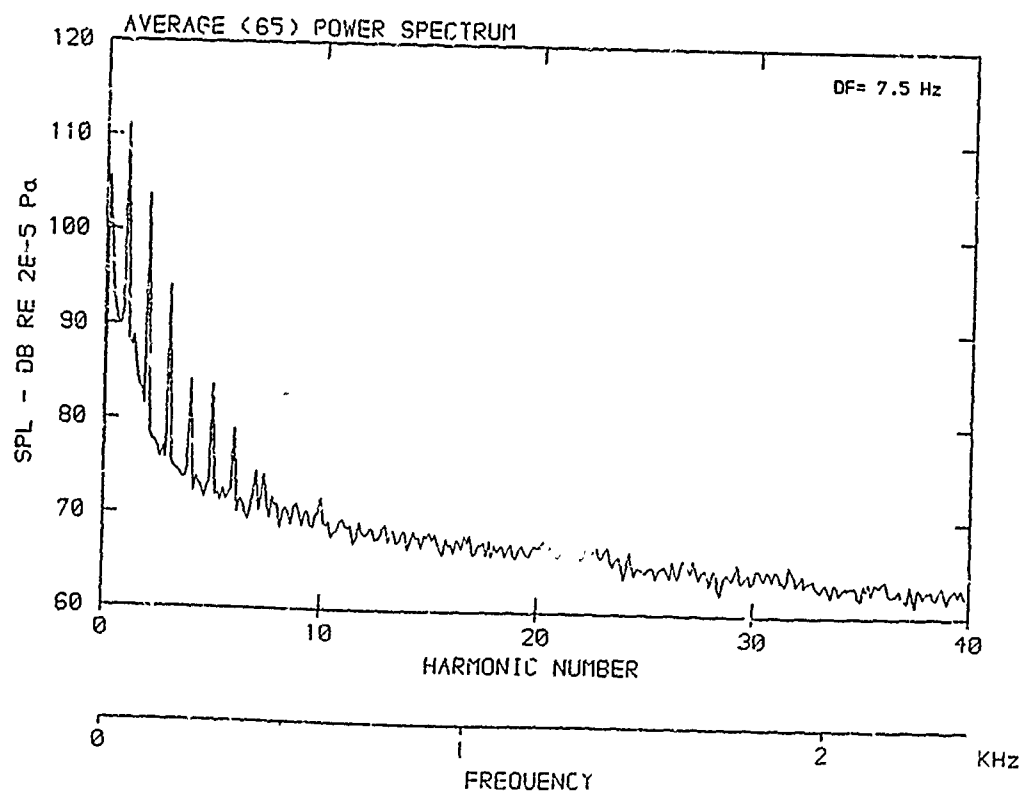
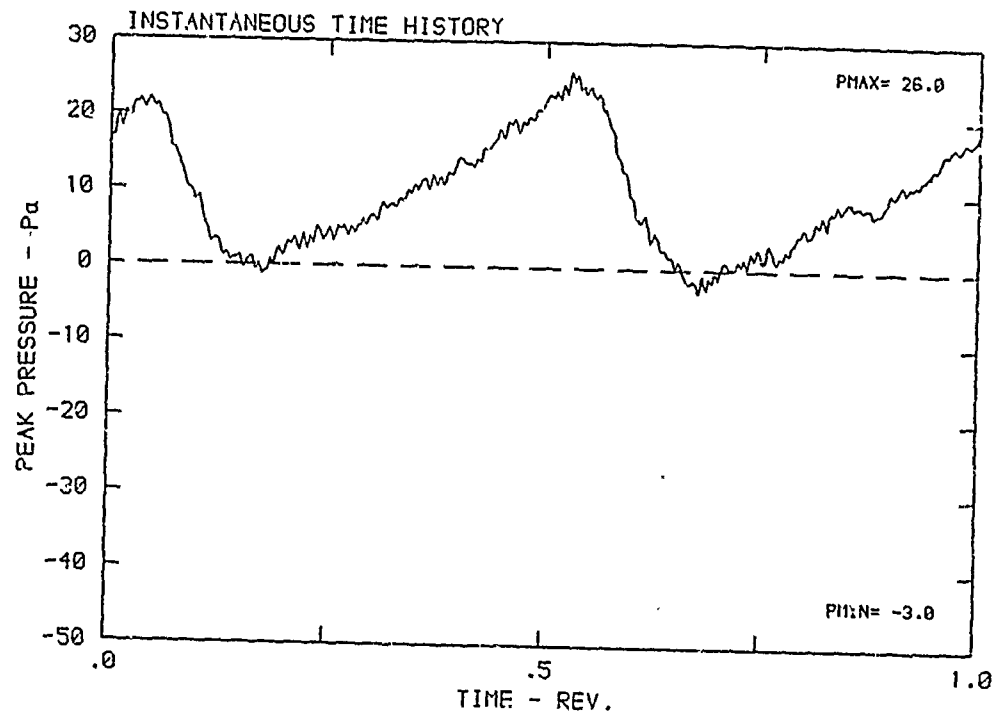
DATA POINT: DN-1 . RUN: 97 MP: 5

$\beta$ : 29.0° MH: .5785 n: 1800 rpm v/u: .229  $\phi$ : .0° T: 297.0 K



DATA POINT: DN-1 RUN: 97 MP: 6

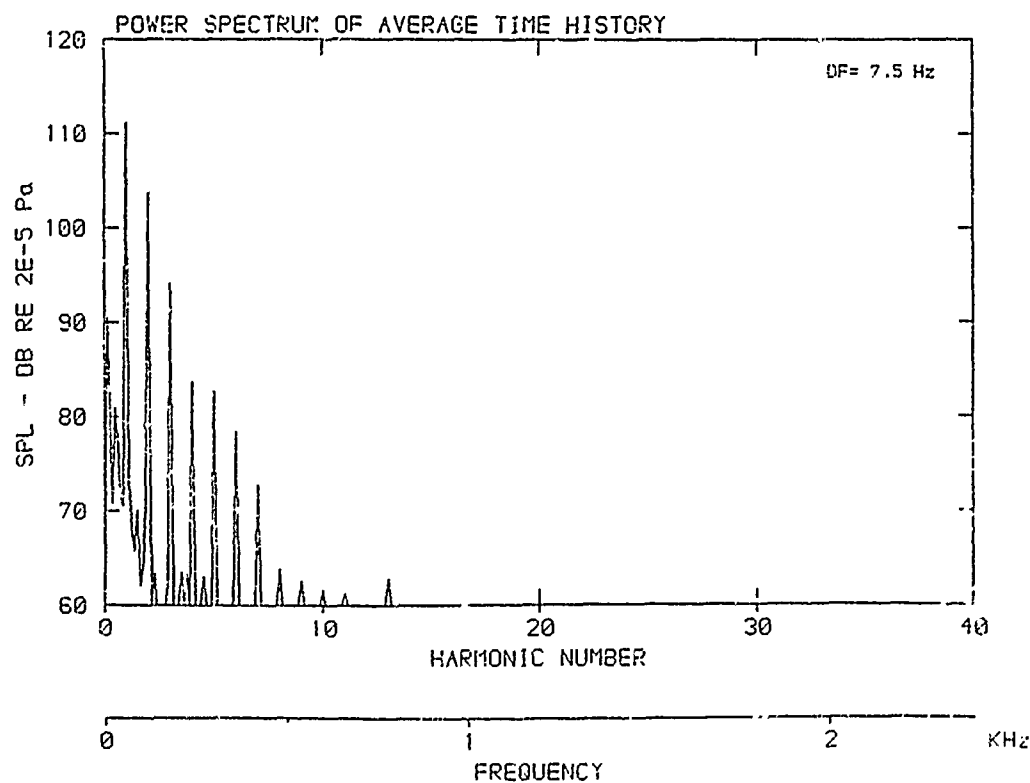
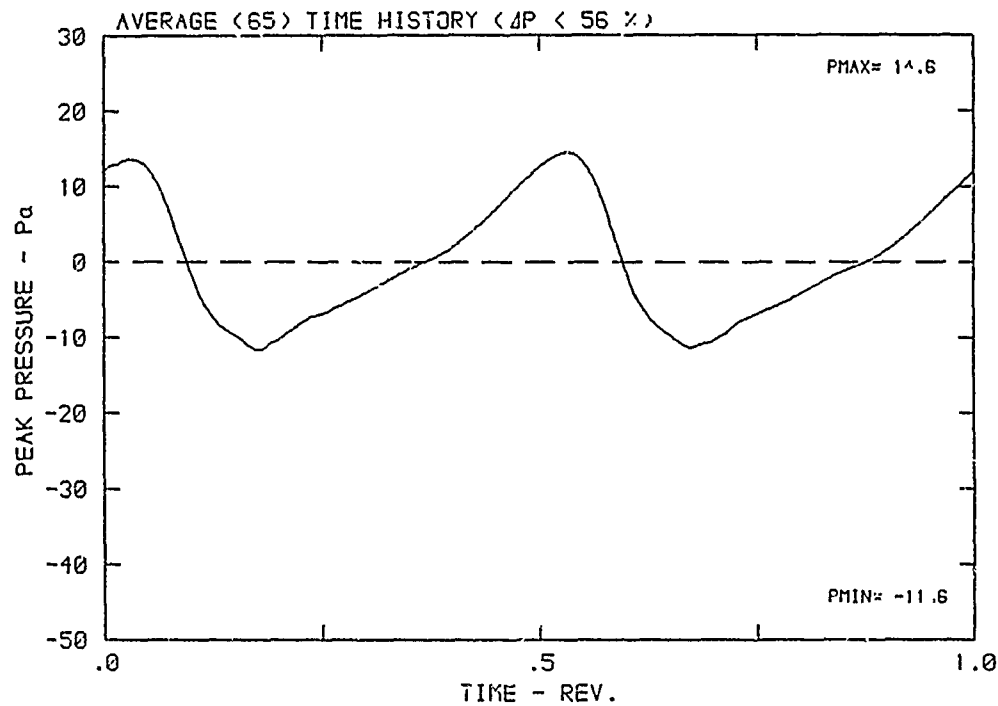
$\beta$ : 29.0° MH: .5785 n: 1800 rpm v/u: .229  $\phi$ : .0° T: 287.0 K





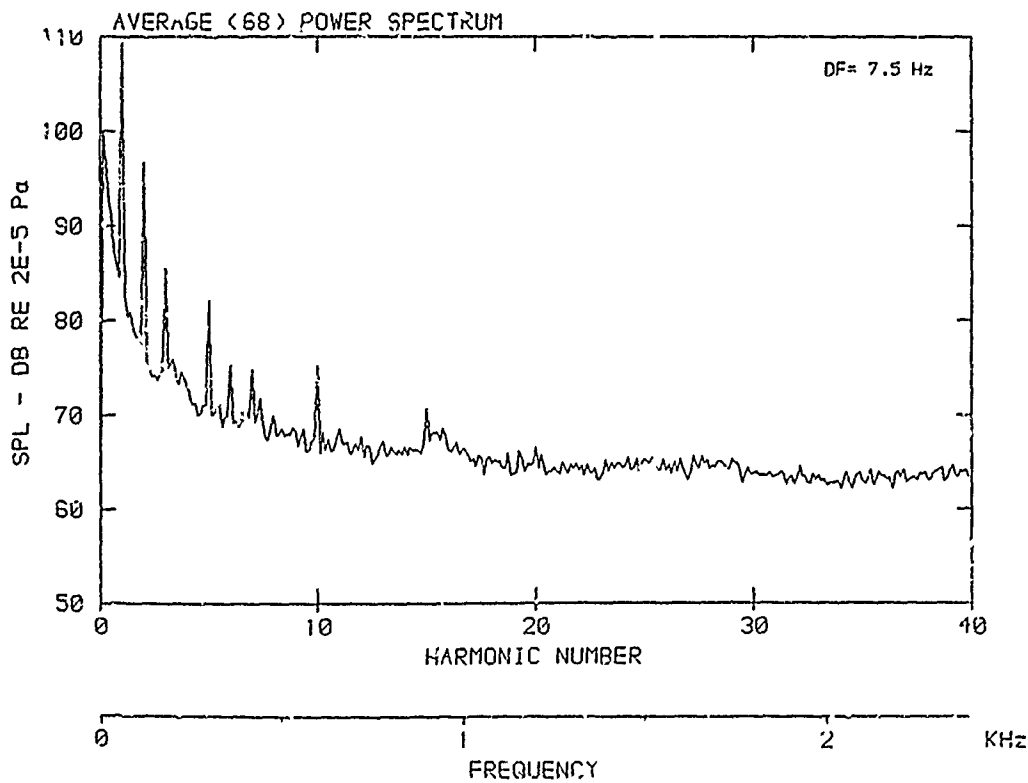
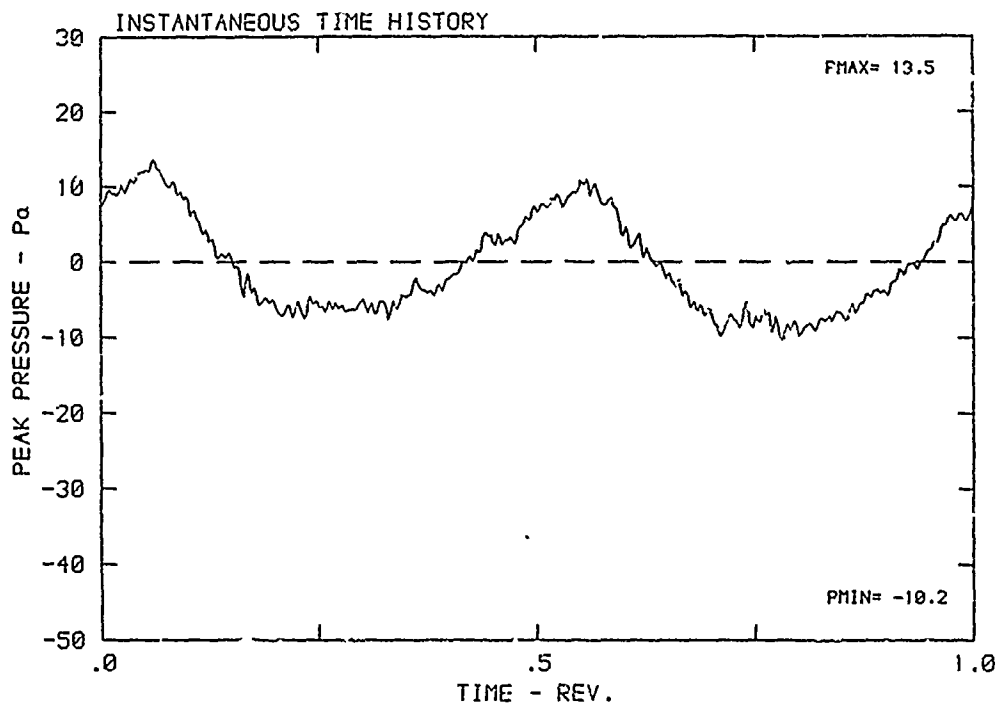
DATA POINT: DN-1    RUN: 97    MP: 6

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm     $v/u$ : .229     $\phi$ : .0°    T: 287.0 K



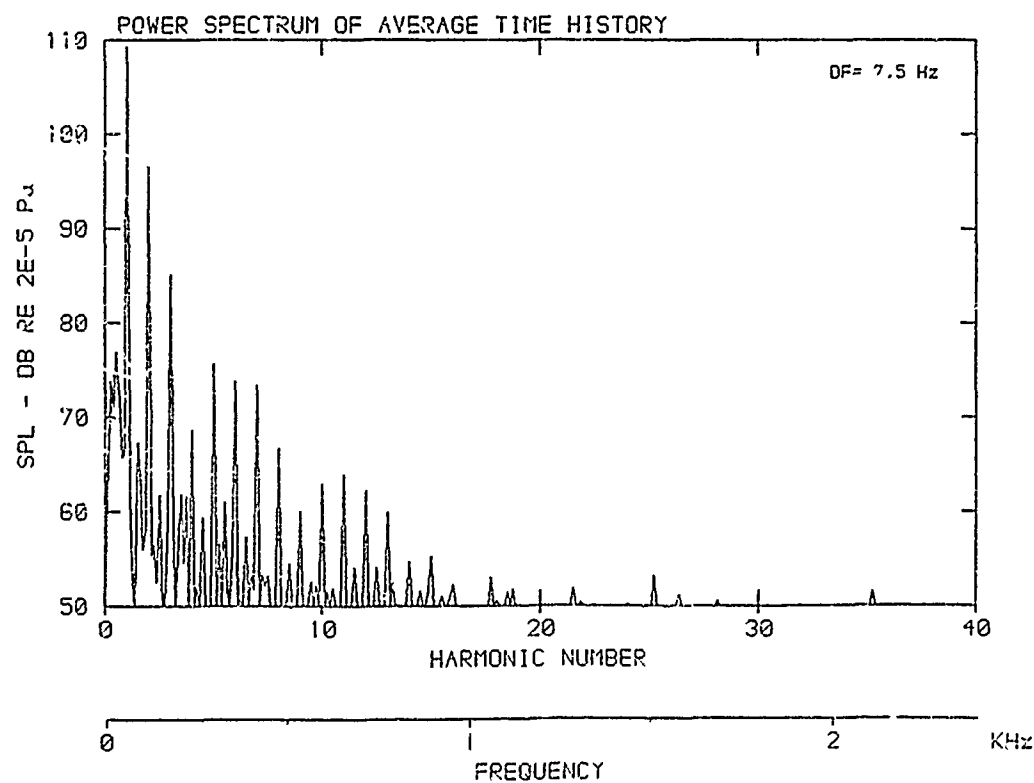
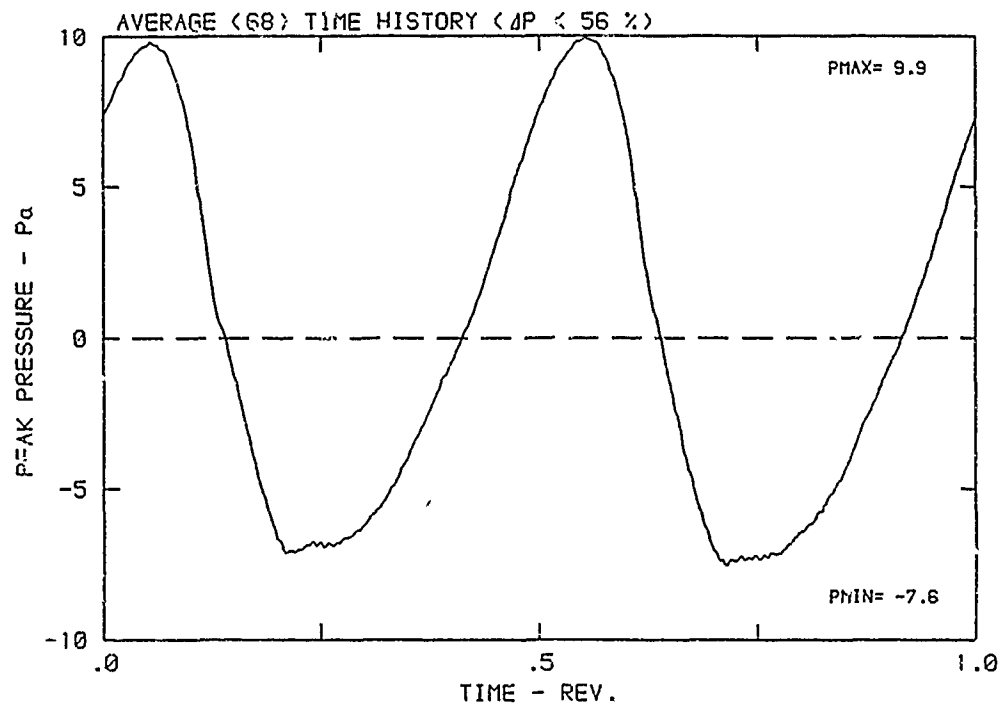
DATA POINT: DN-1 RUN: 97 MP: 7

$\beta$ : 29.0° MH: .5785 n: 1800 rpm v/u: .229  $\phi$ : .0° T: 287.0 K



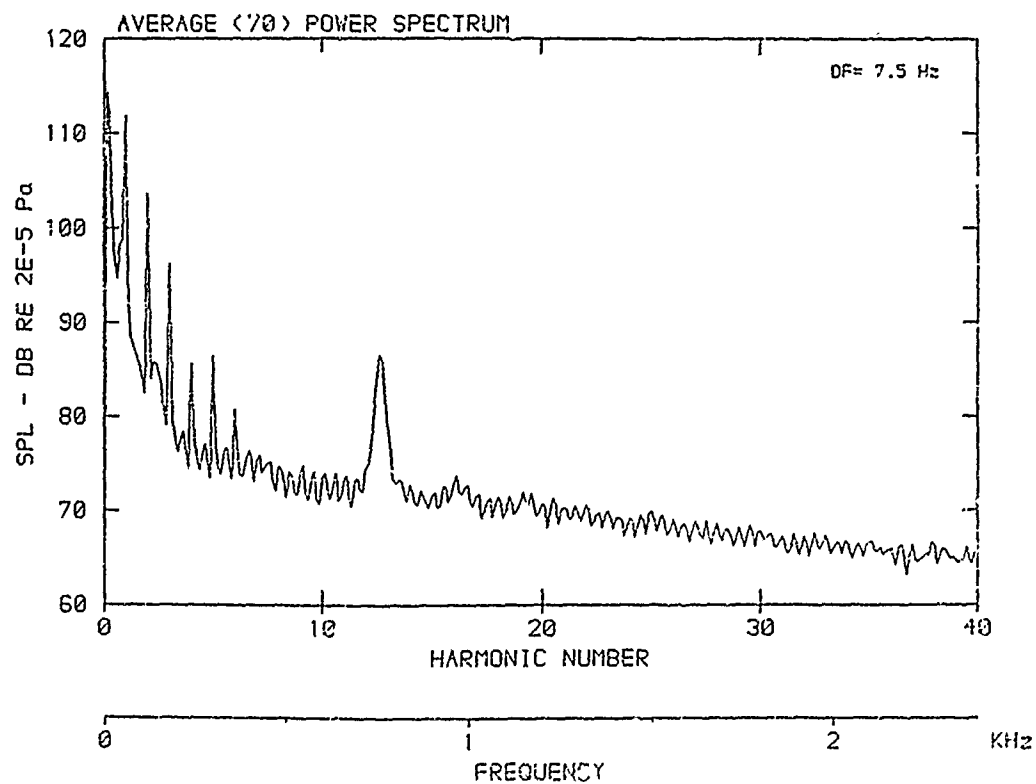
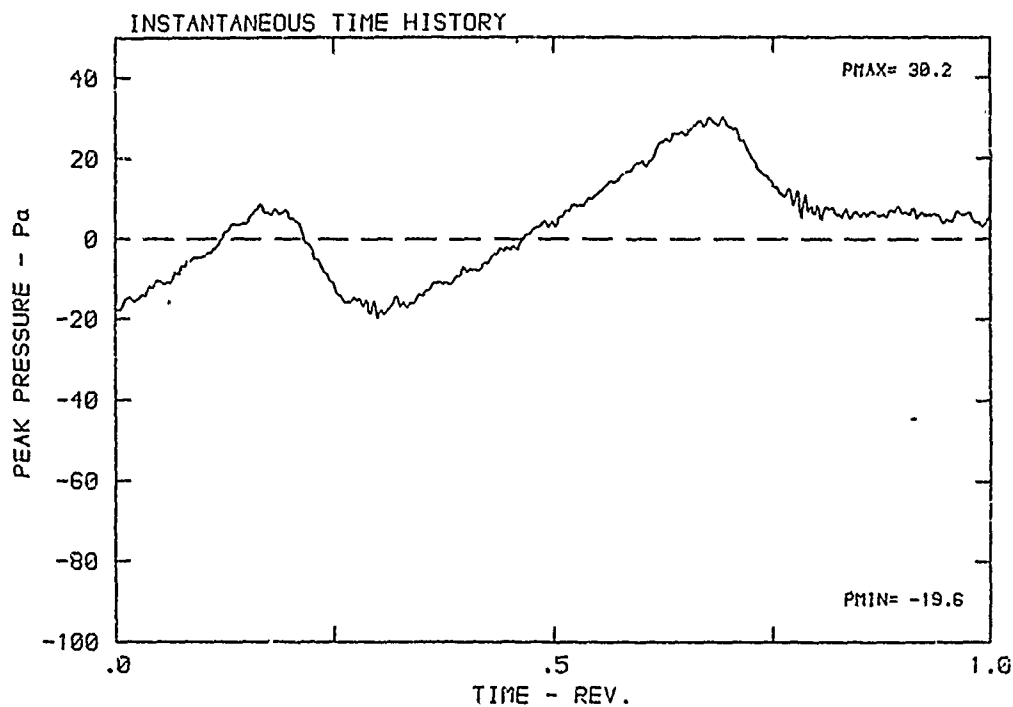
DATA POINT: DN-1      RUN: 97      MP: 7

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm    v/u: .229     $\phi$ : .0°    T: 287.0 K



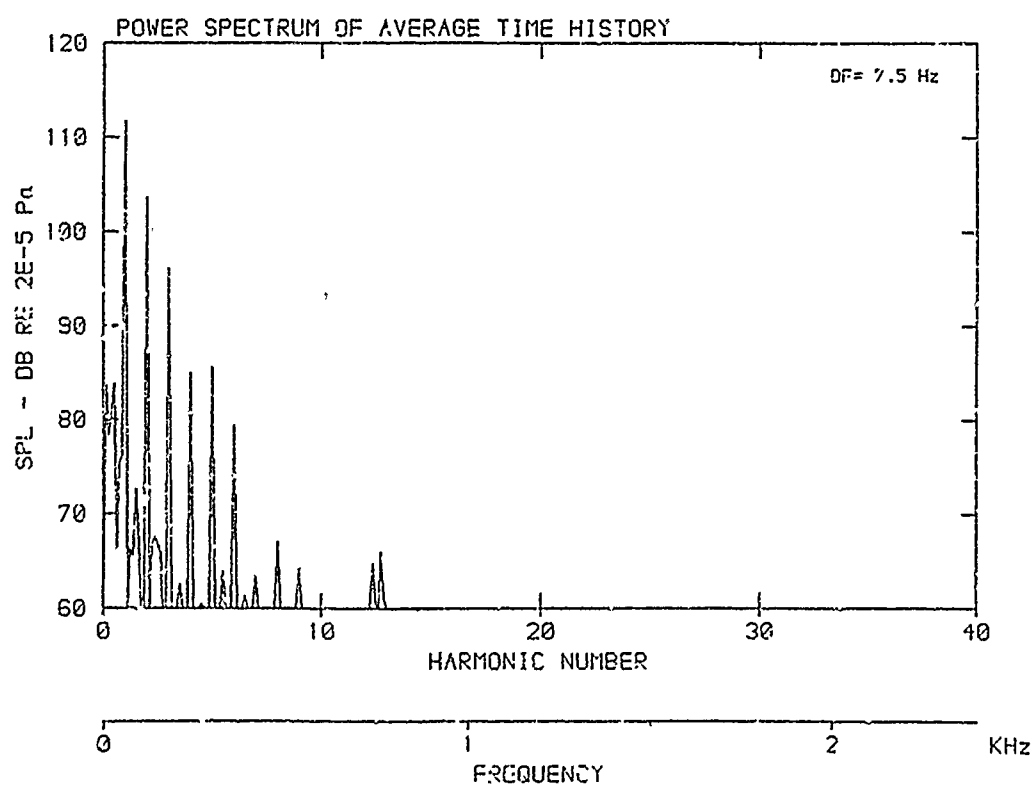
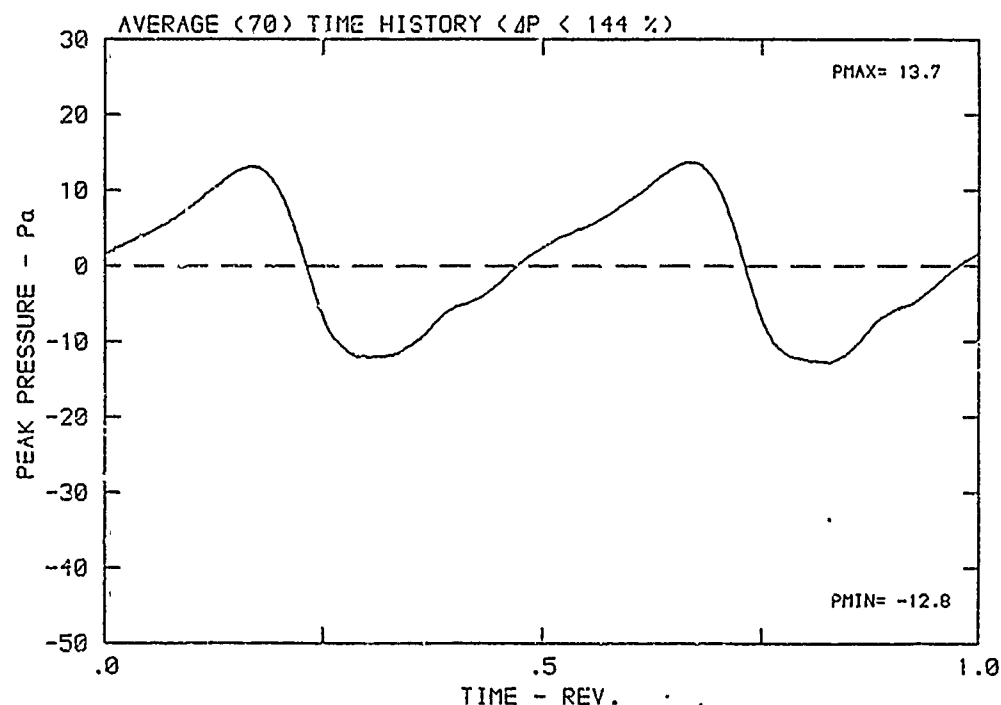
DATA POINT: DN-1 RUN: 97 MP: 9

$\beta$ : 29.0° MH: .5785 n: 1800 rpm v/u: .229  $\phi$ : .0° T: 287.0 K



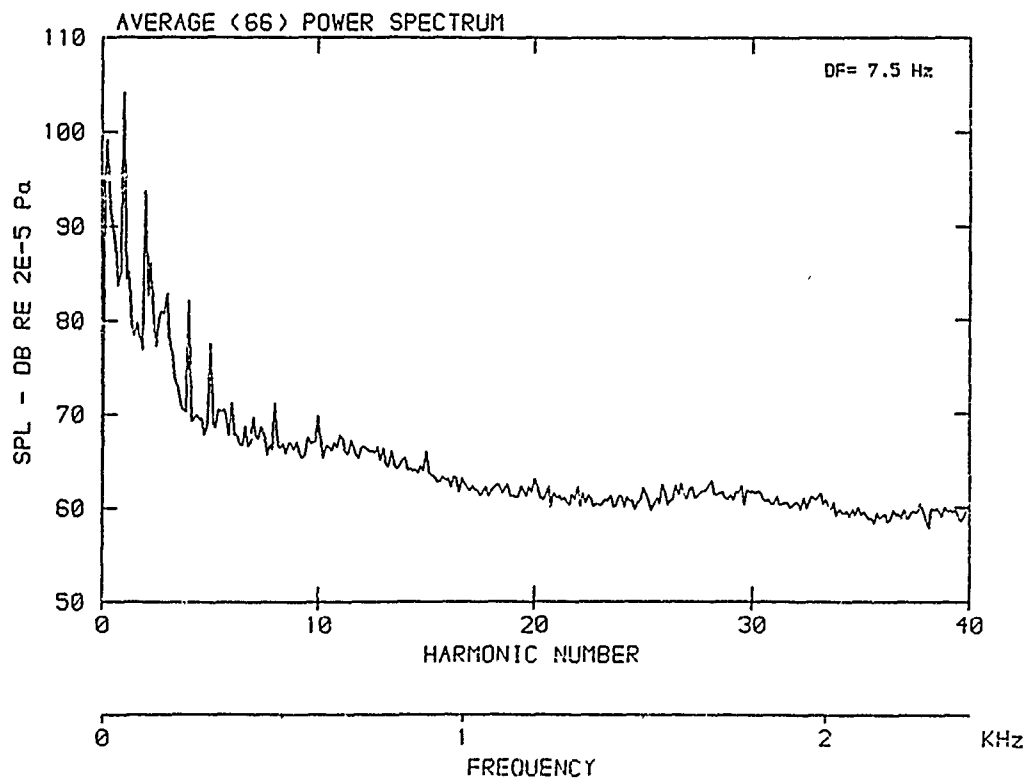
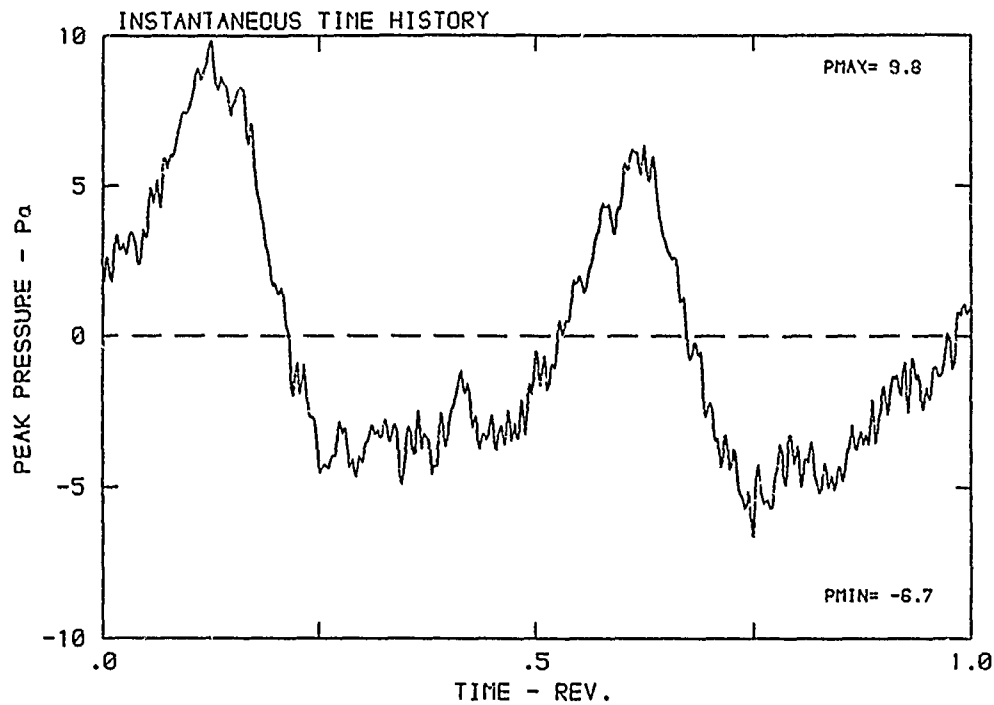
DATA POINT: DN-1      RUN: 97      MP: 9

$\beta$ : 29.0°    MH: .5785    n: 1800 rpm    v/u: .229     $\phi$ : .0°    T: 287.0 K



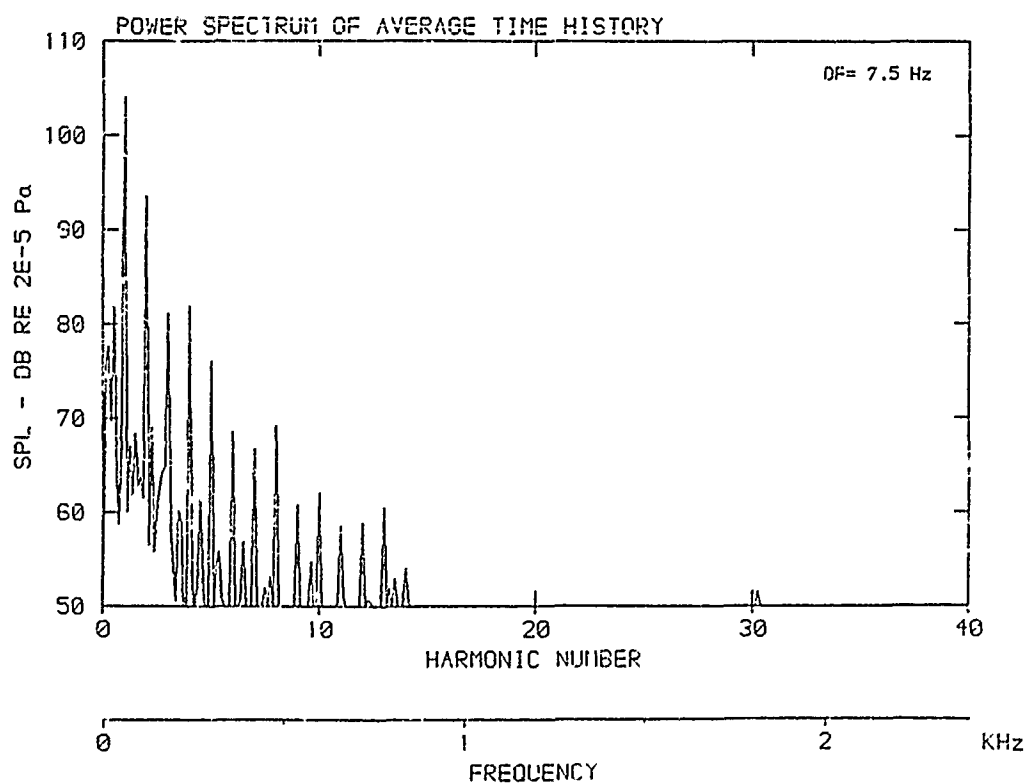
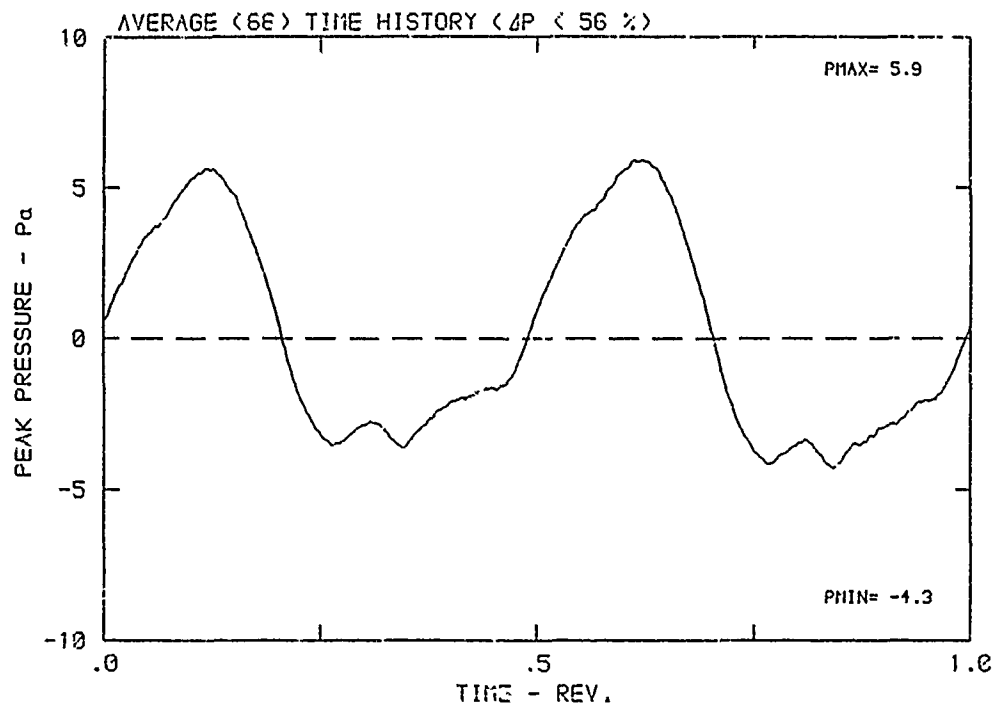
DATA POINT: DN-2    RUN: 93    MP: 1

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



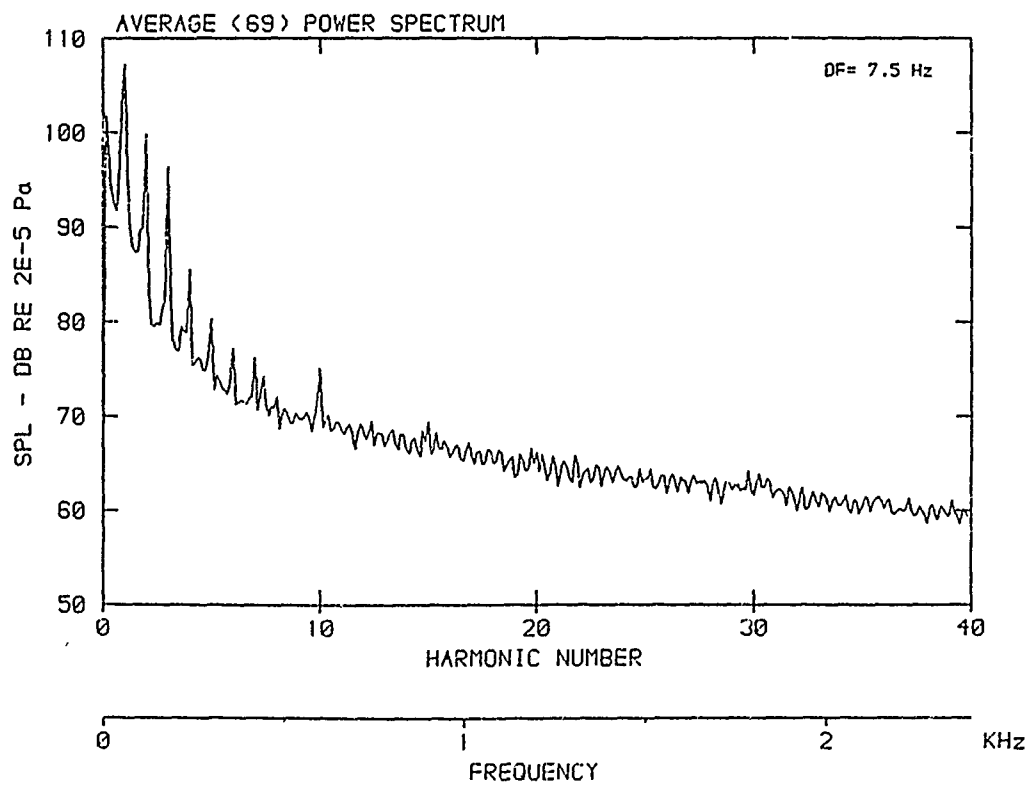
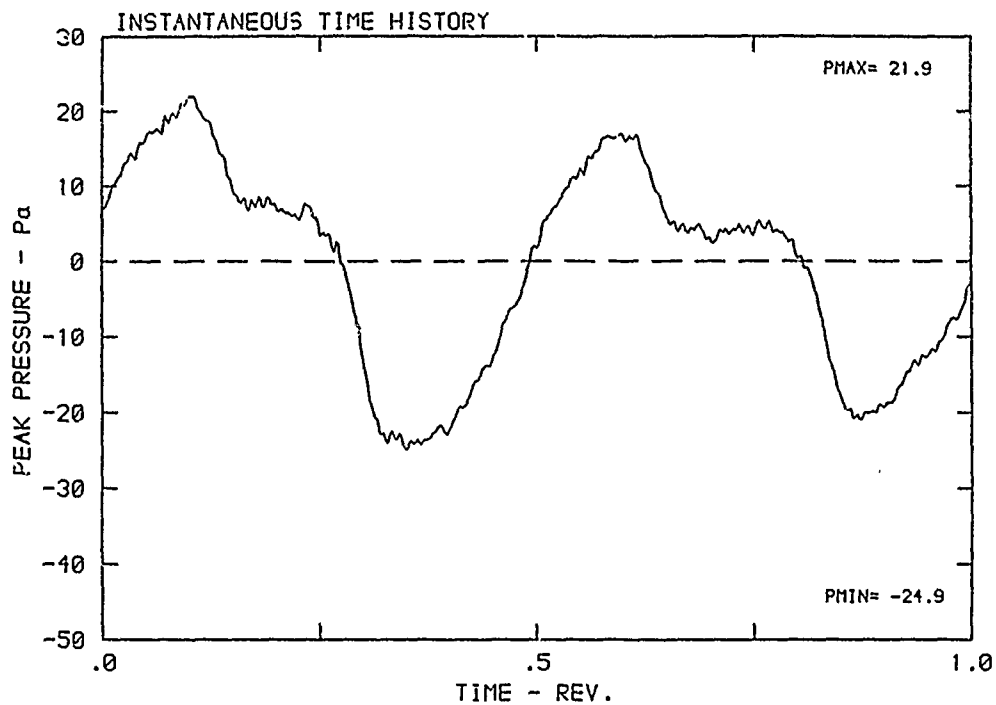
DATA POINT: DN-2	RUN: 93	MP: 1
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$\beta$ : 29.0° MH: .5852 n: 1800 rpm v/u: .268  $\phi$ : .0° T: 285.6 K



DATA POINT: DN-2    RUN: 93    MP: 2

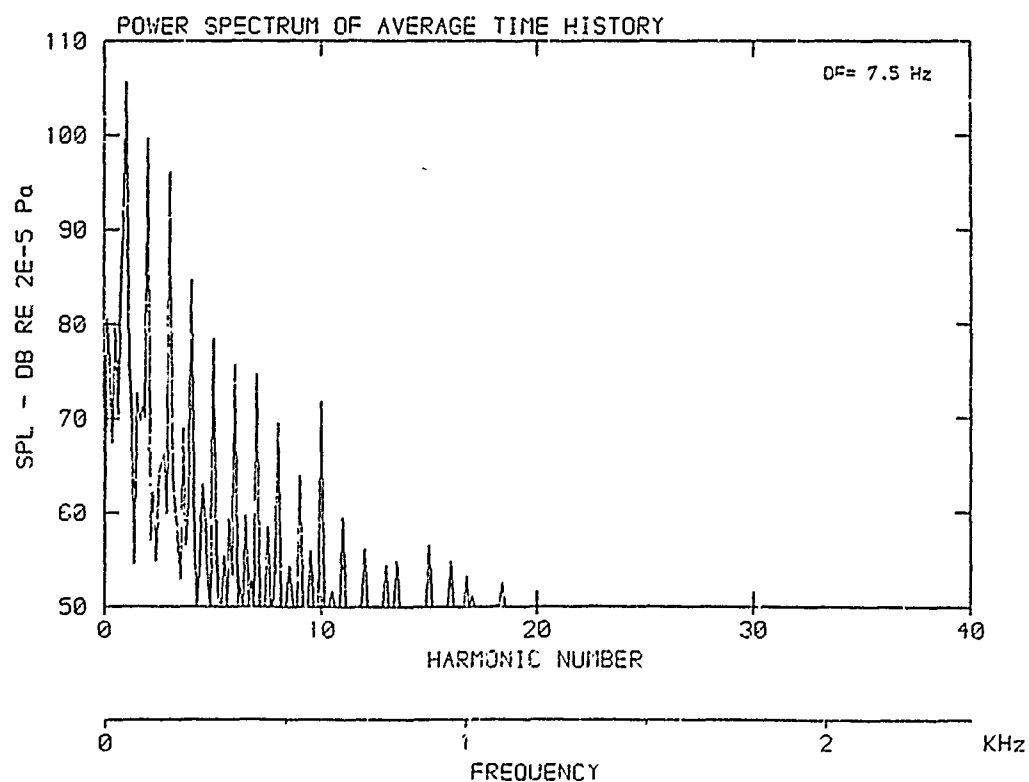
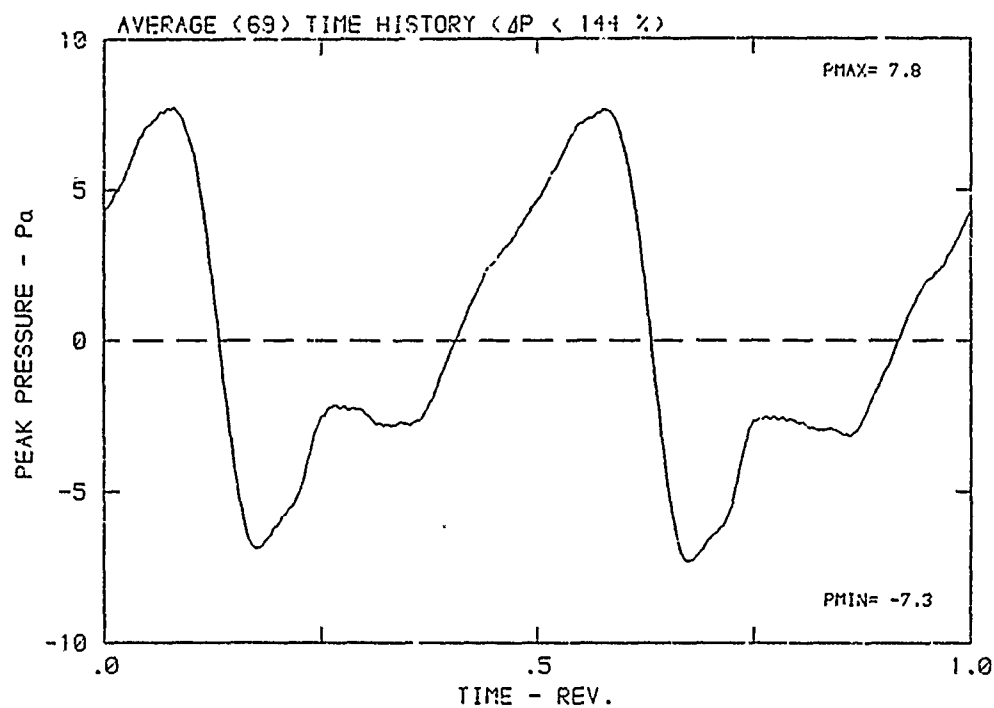
$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K





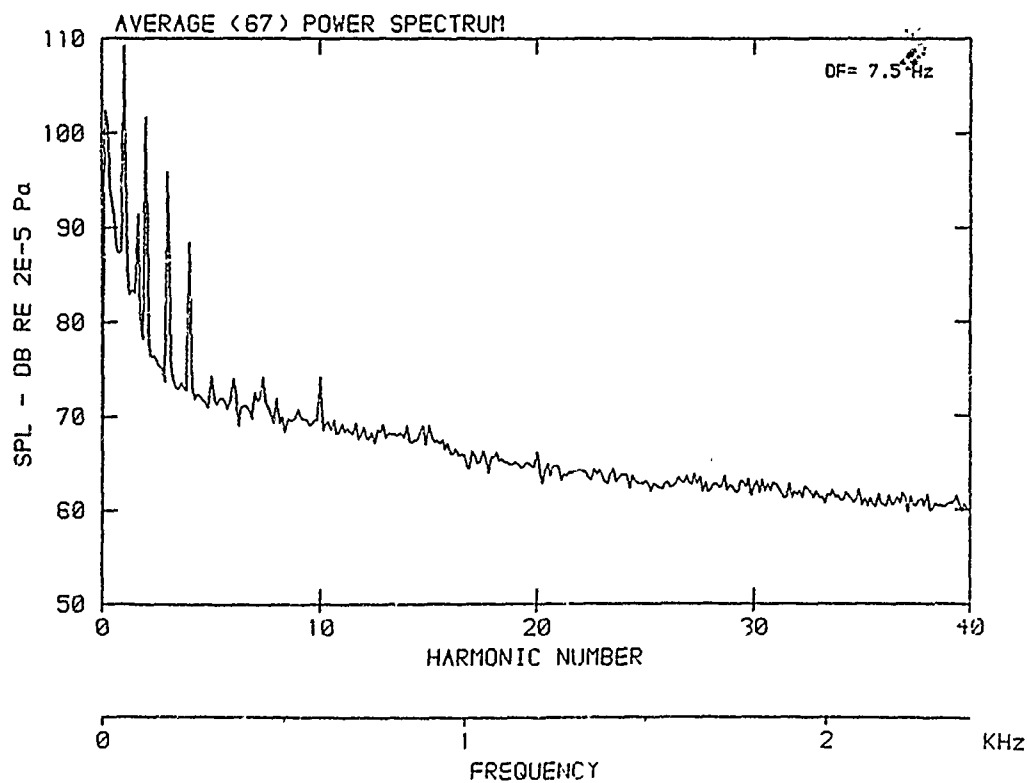
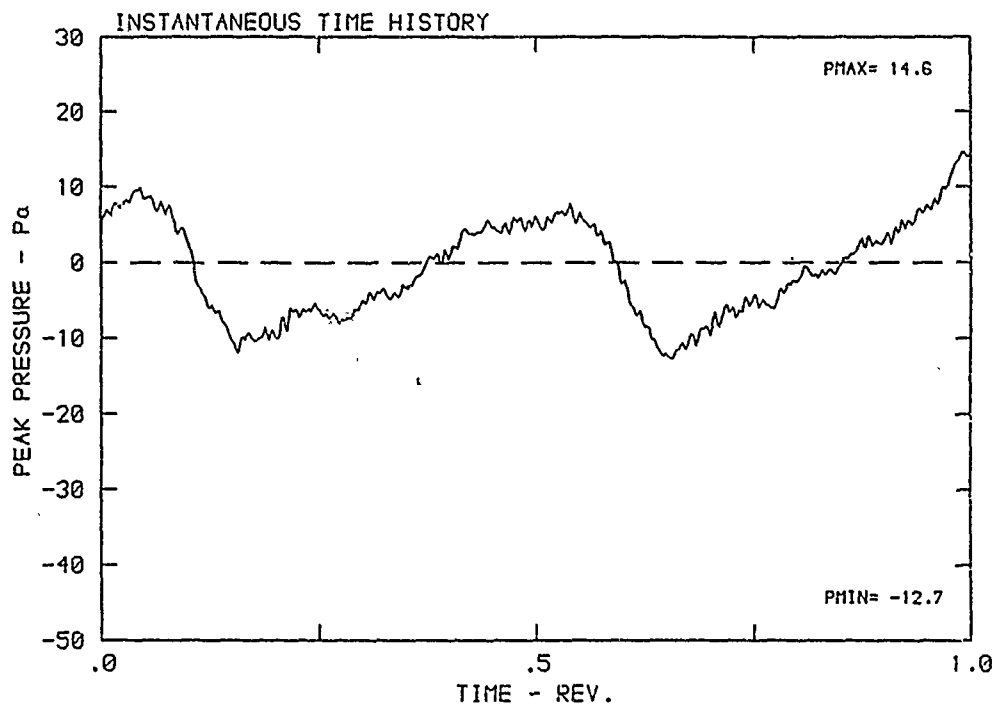
DATA POINT: DN-2    RUN: 93    MP: 2

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm     $v/u$ : .268     $\phi$ : .0°    T: 285.6 K



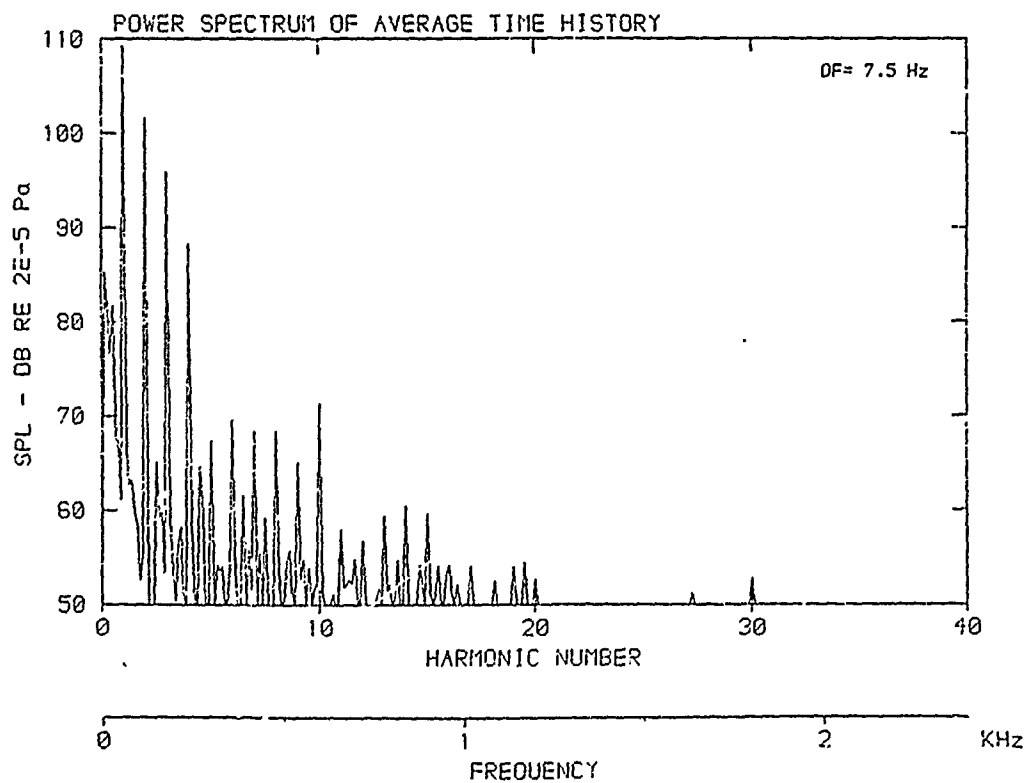
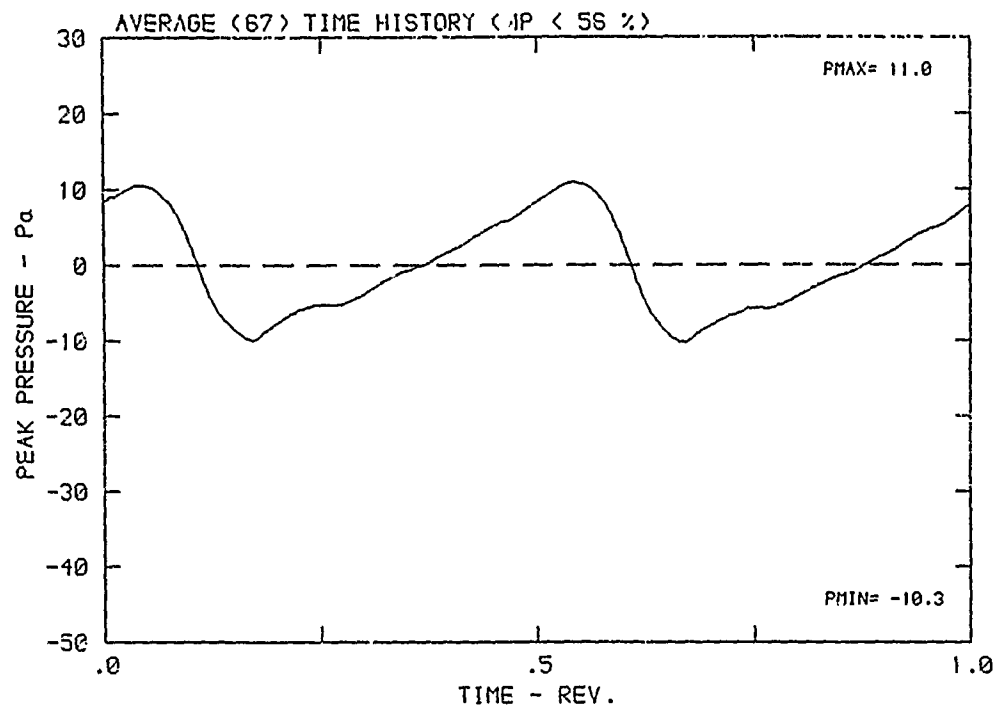
DATA POINT: DN-2 RUN: 93 MP: 3

$\beta$ : 29.0° MH: .5852 n: 1800 rpm  $v/u$ : .268  $\phi$ : .0° T: 265.6 K



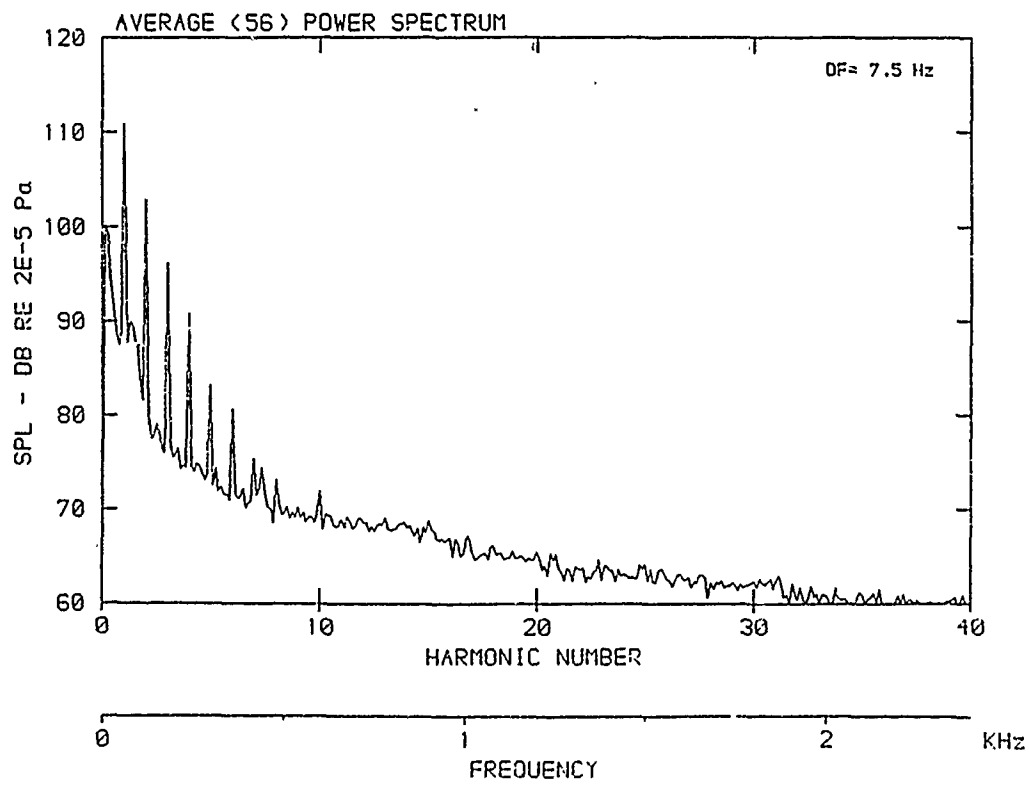
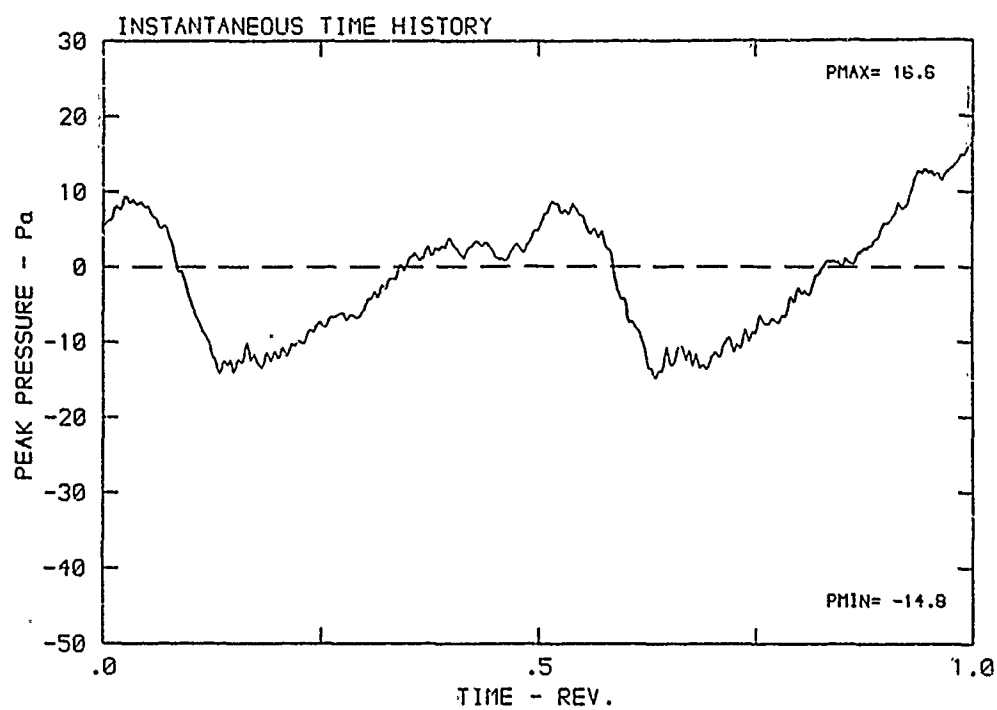
DATA POINT: DN-2    RUN: 93    MP: 3

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



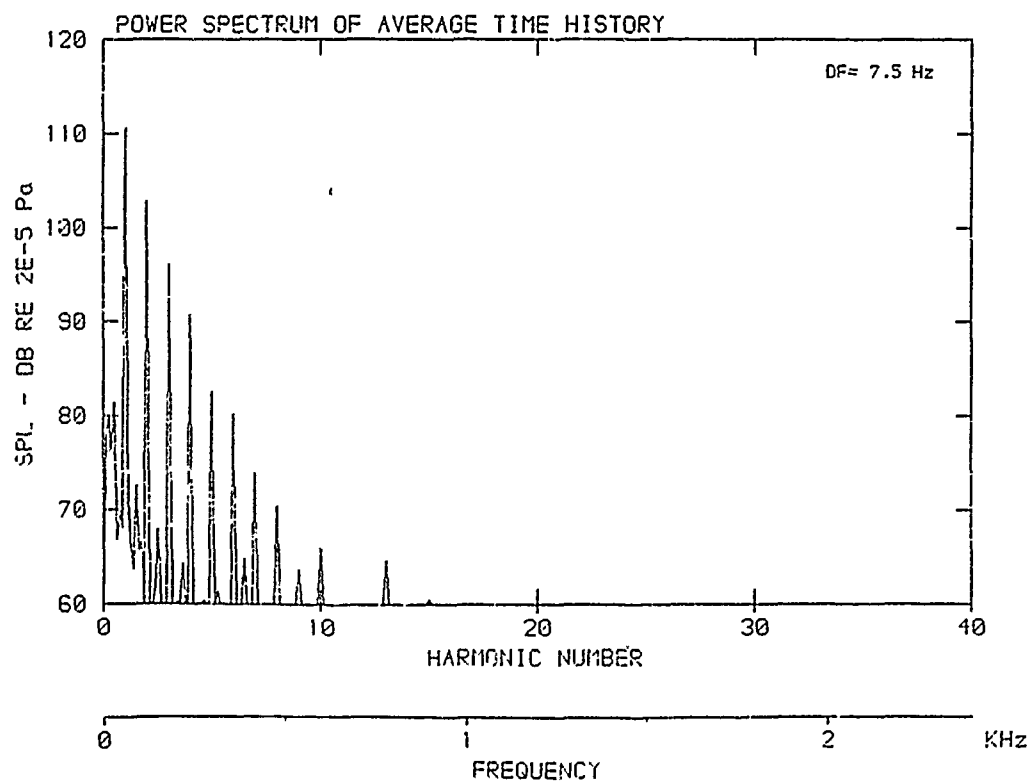
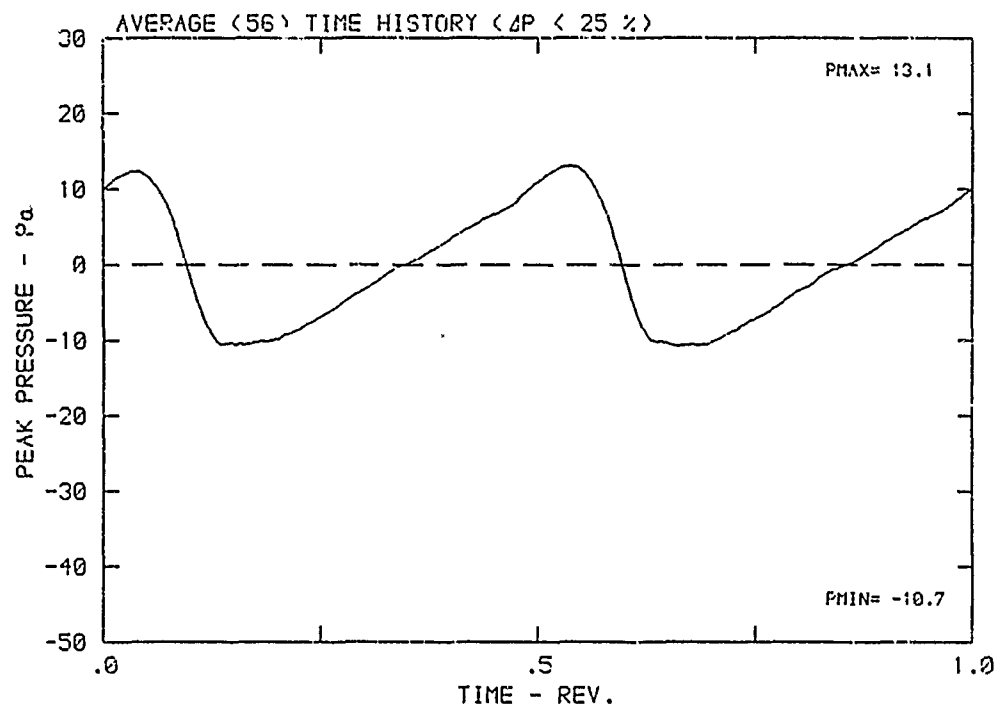
DATA POINT: DN-2    RUN: 93    MP: 4

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



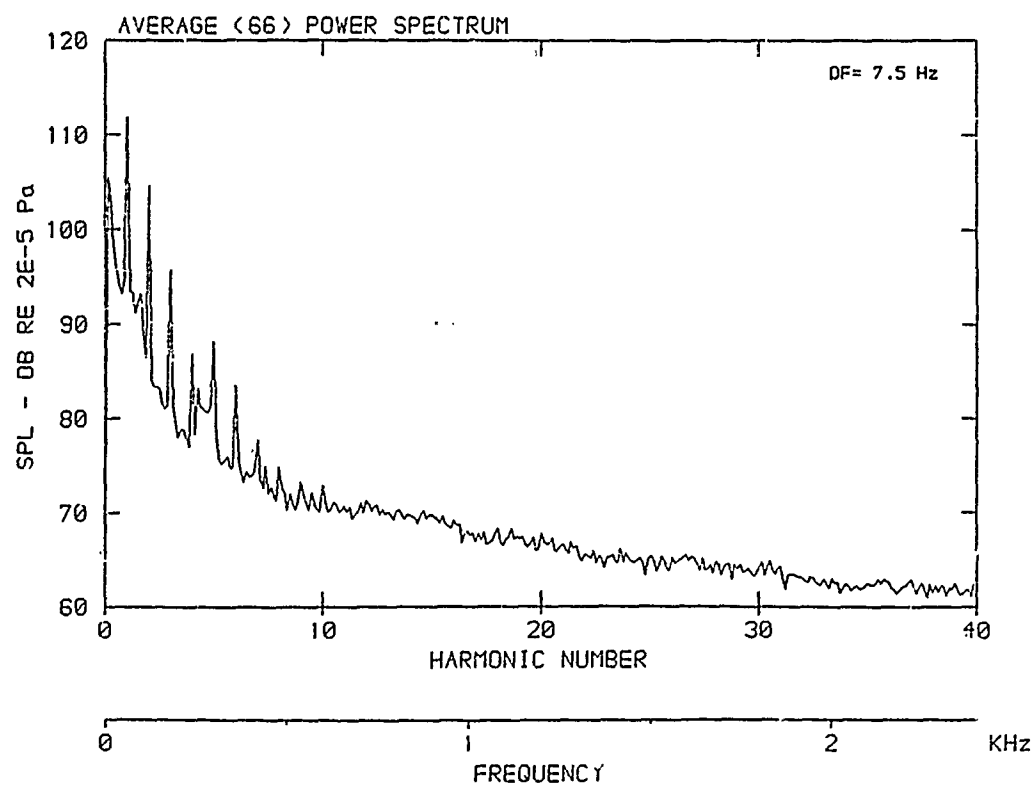
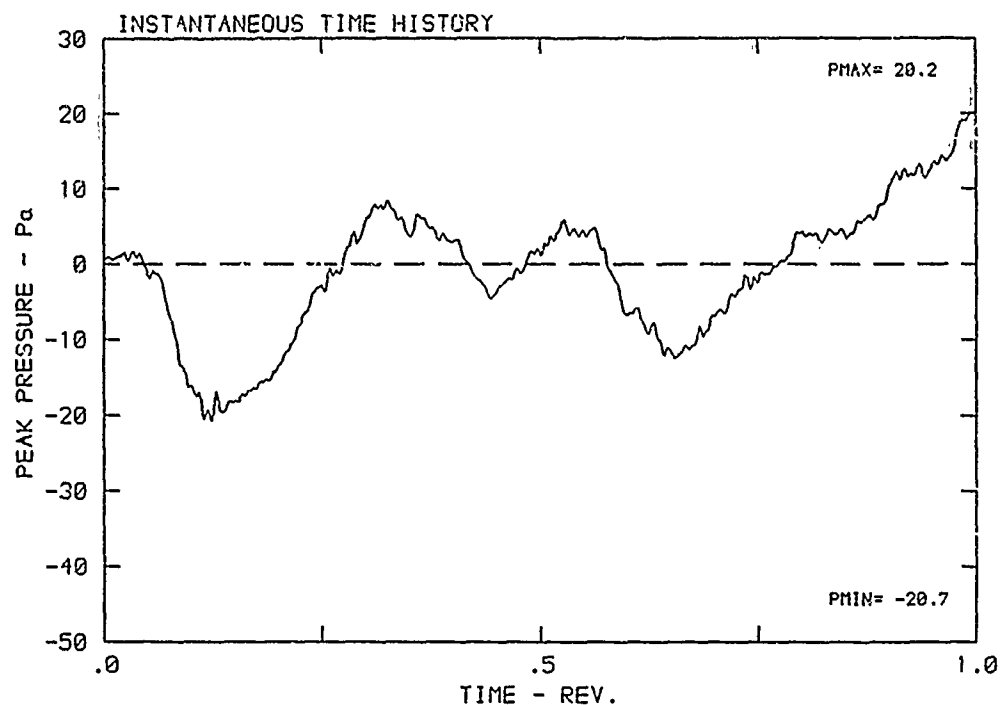
DATA POINT: DN-2    RUN: 93    MP: 4

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



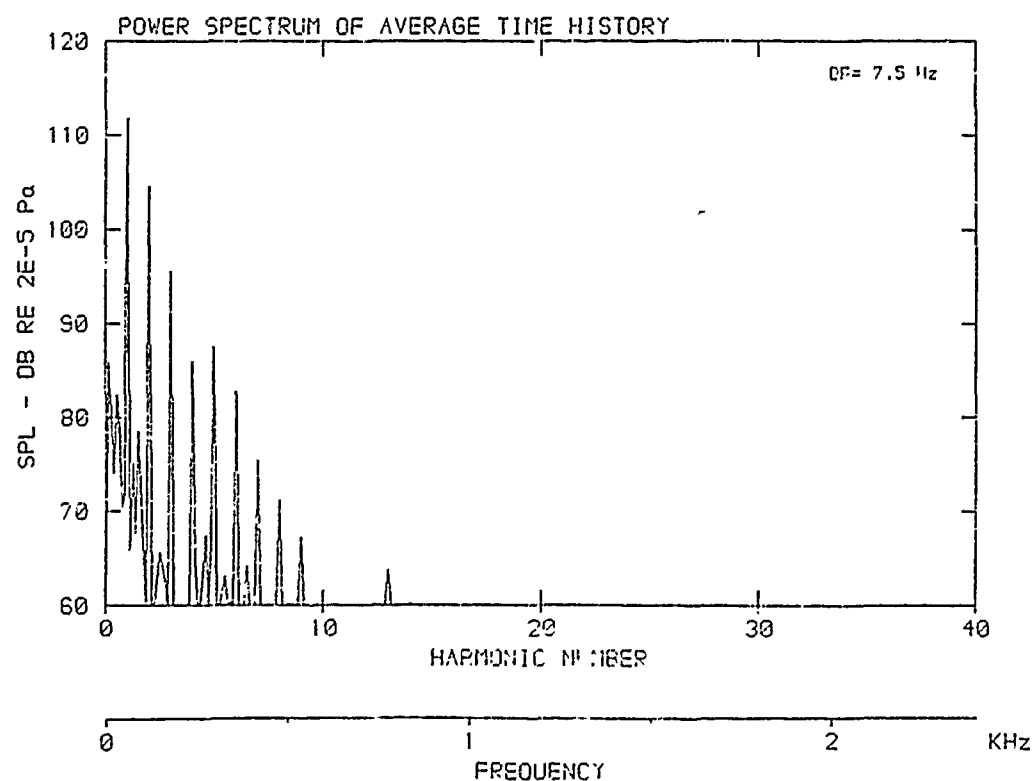
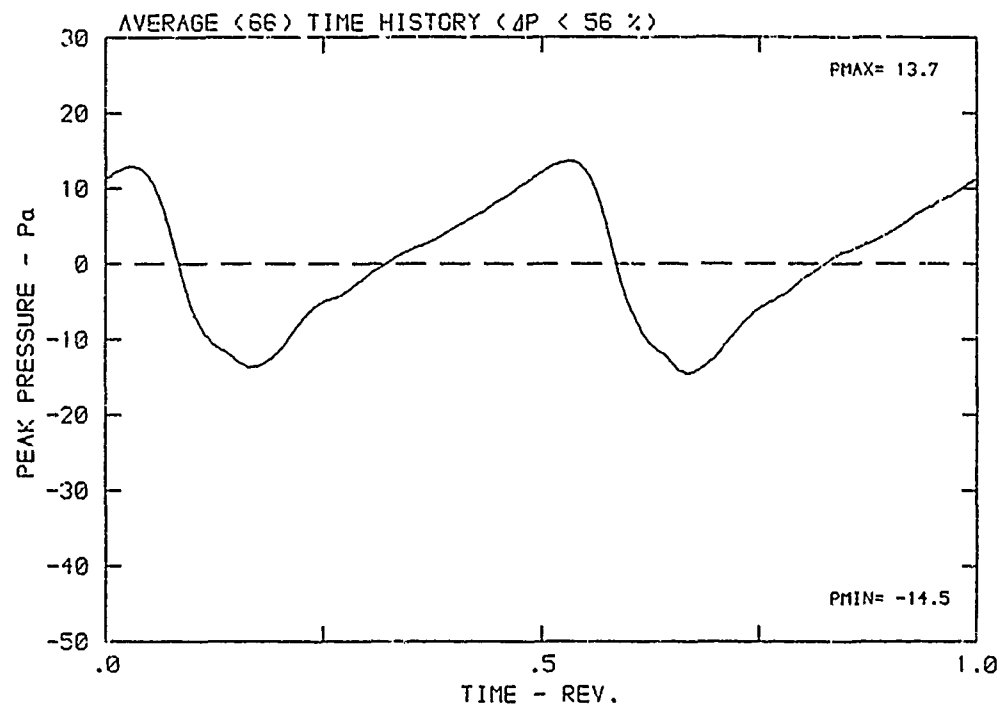
DATA POINT: DN-2 RUN: 93 MP: 5

$\beta$ : 29.0° MH: .5852 n: 1800 rpm  $v/u$ : .268  $\phi$ : .0° T: 285.6 K



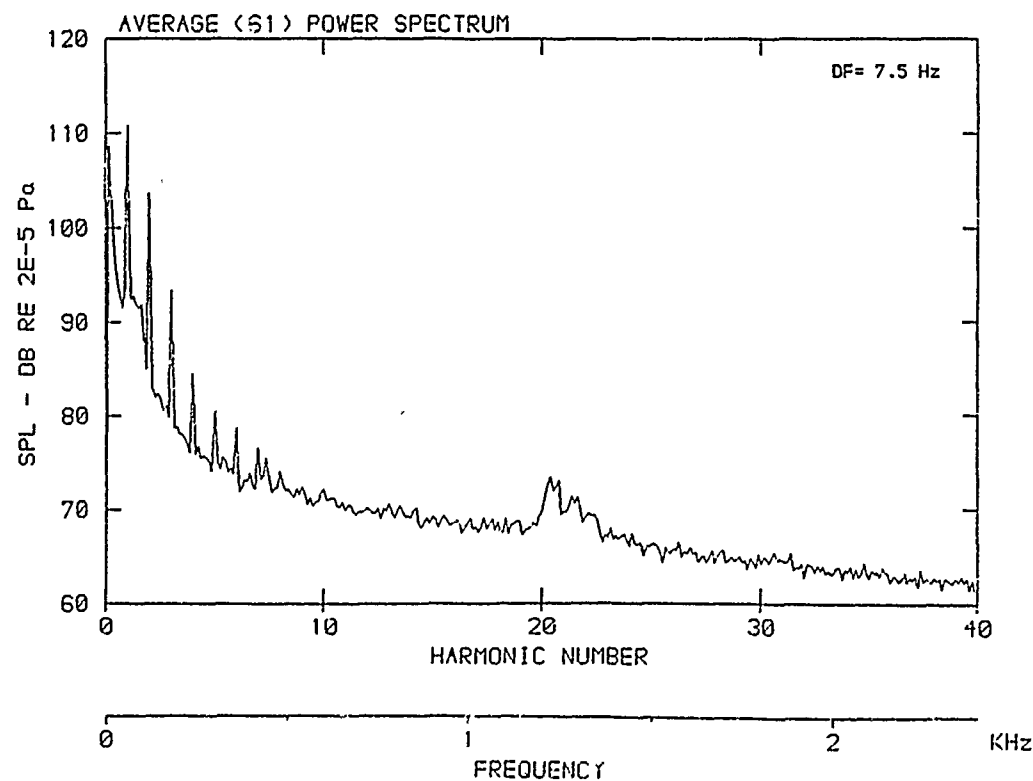
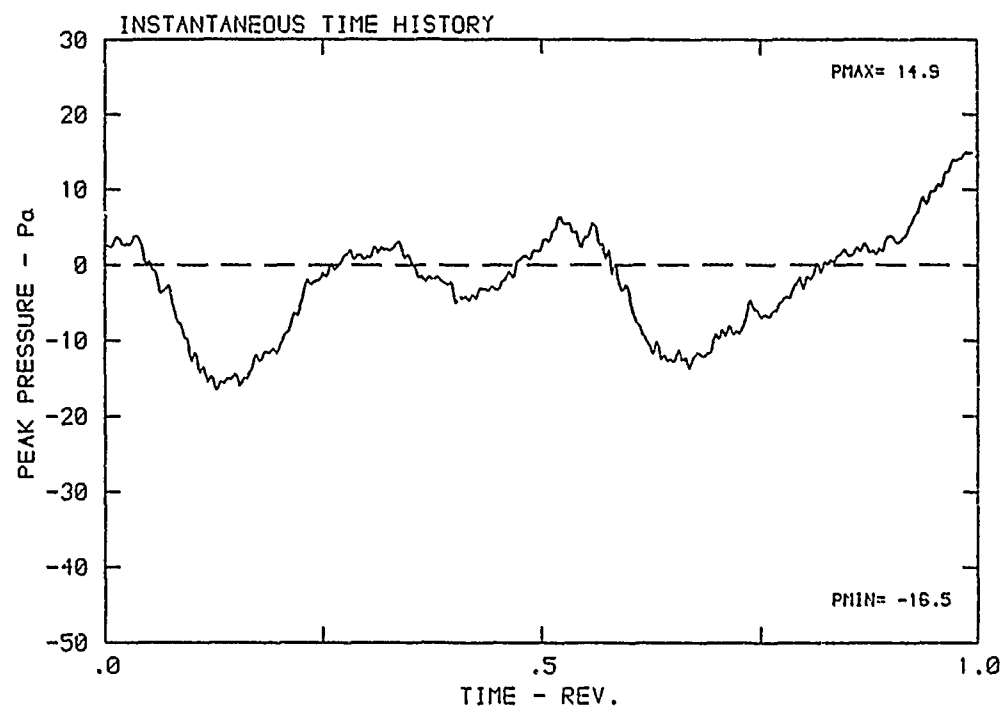
DATA POINT: DN-2    RUN: 93    MP: 5

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



DATA POINT: DN-2 RUN: 93 MP: 6

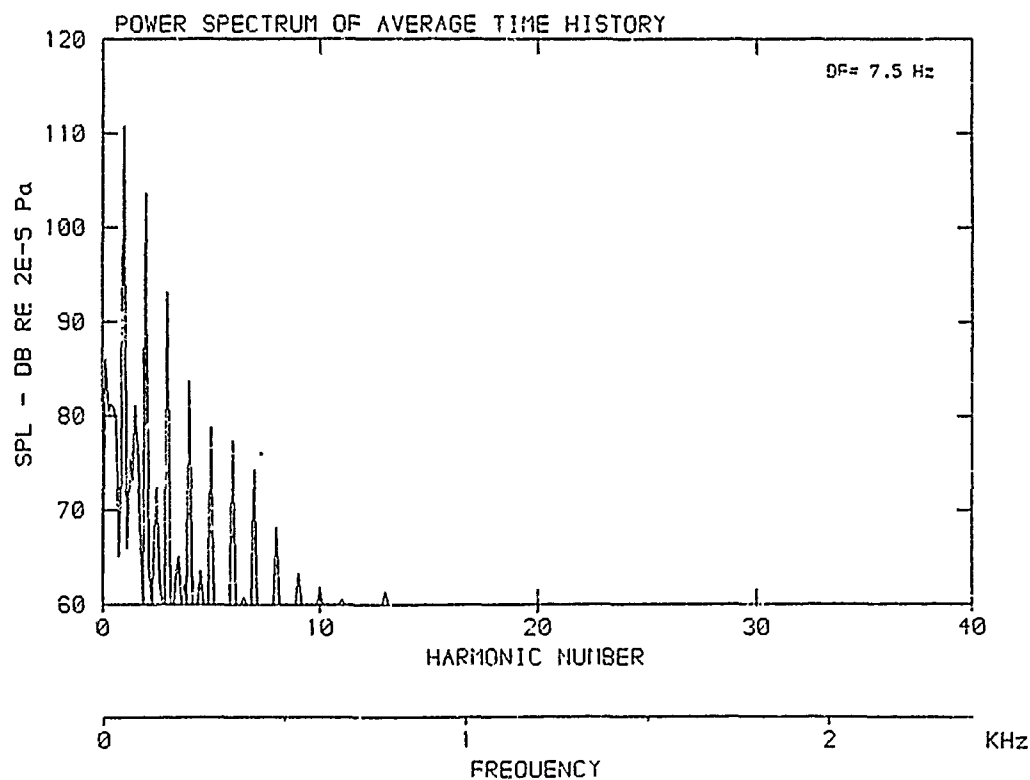
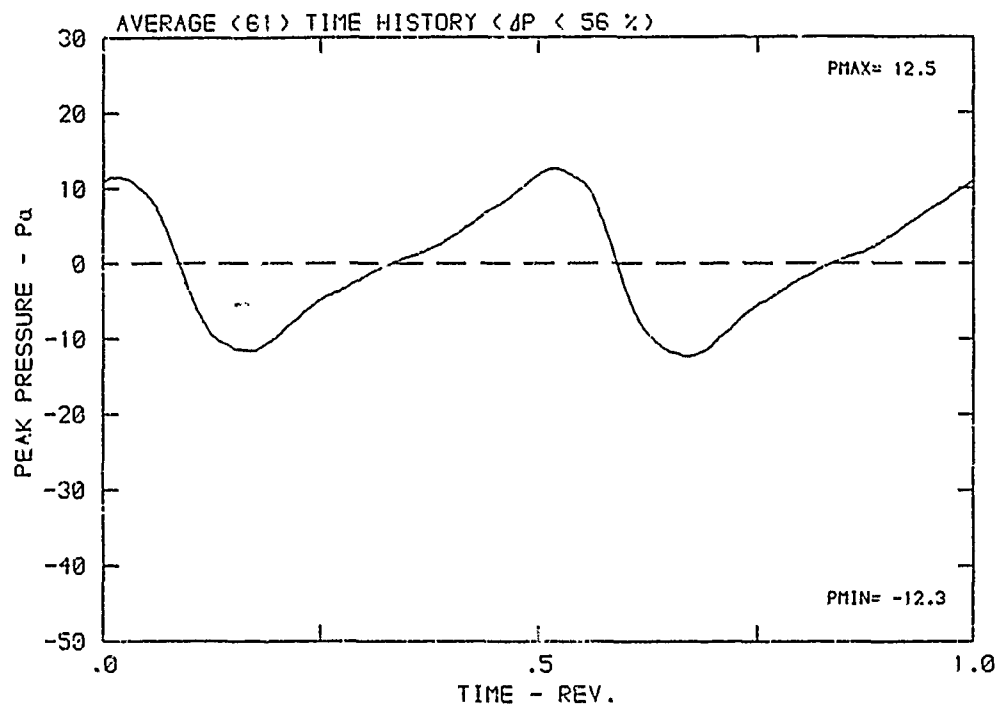
$\beta$ : 29.0° MH: .5852 n: 1800 rpm v/u: .268  $\phi$ : .0° T: 285.6 K





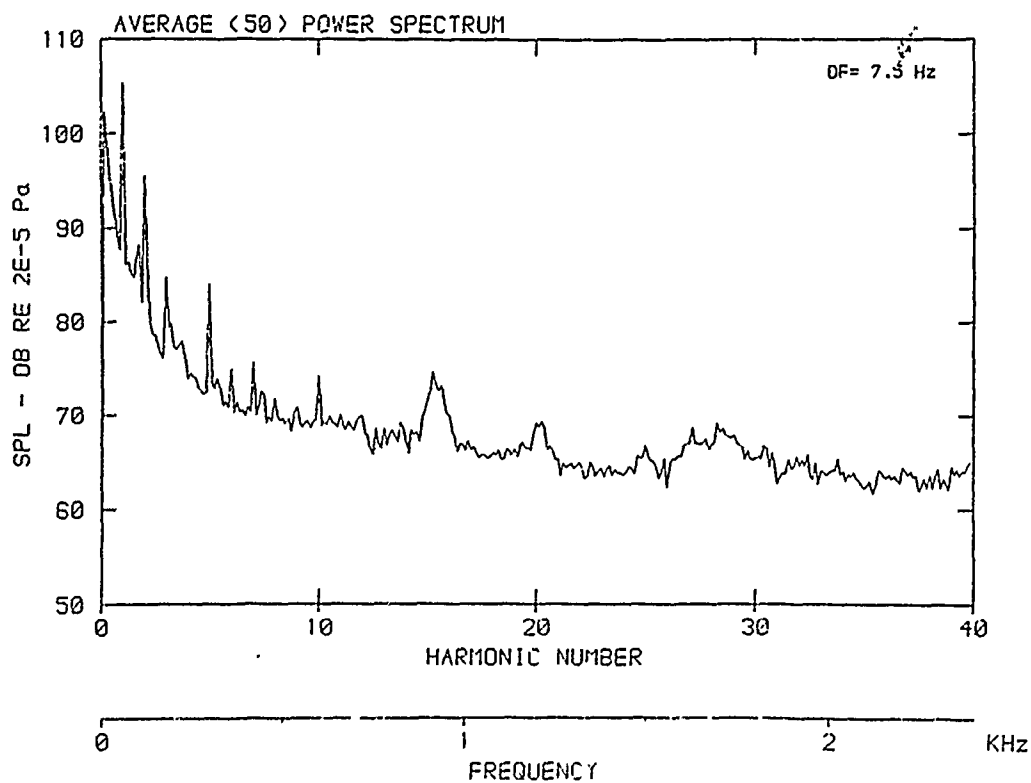
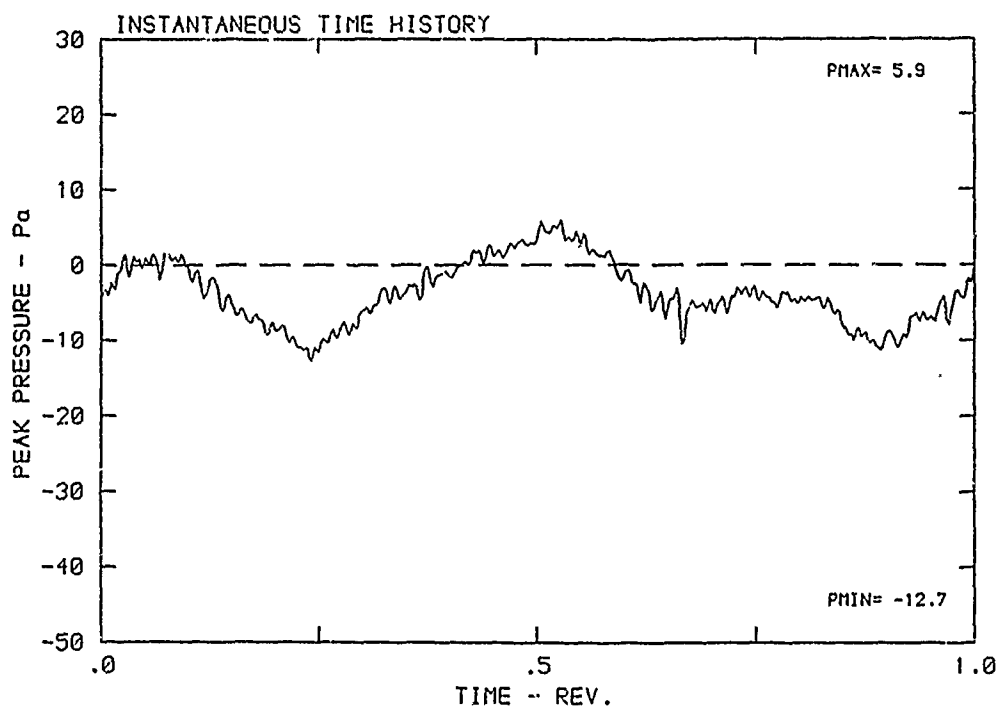
DATA POINT: DN-2    RUN: 93    MP: 6

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



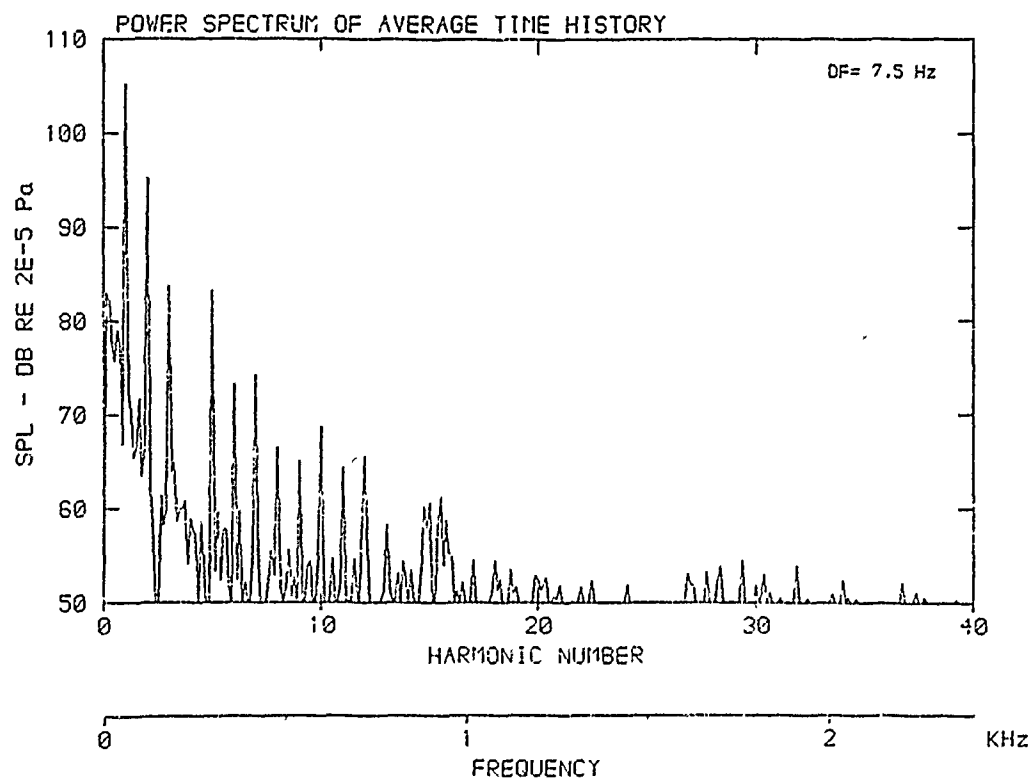
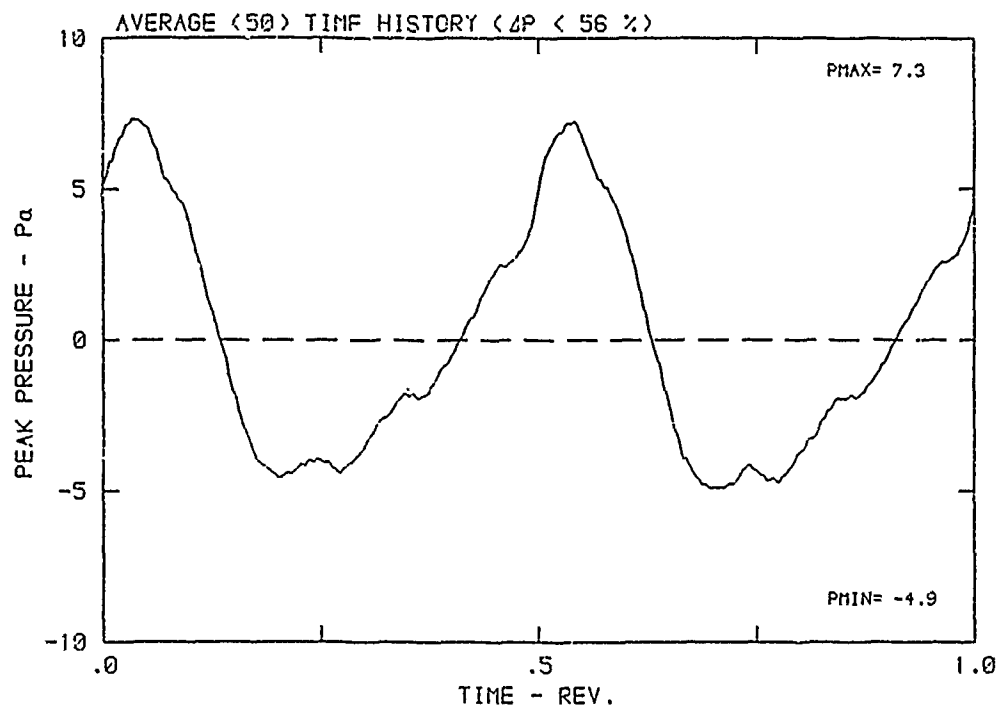
DATA POINT: DN-2    RUN: 93    MP: 7

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



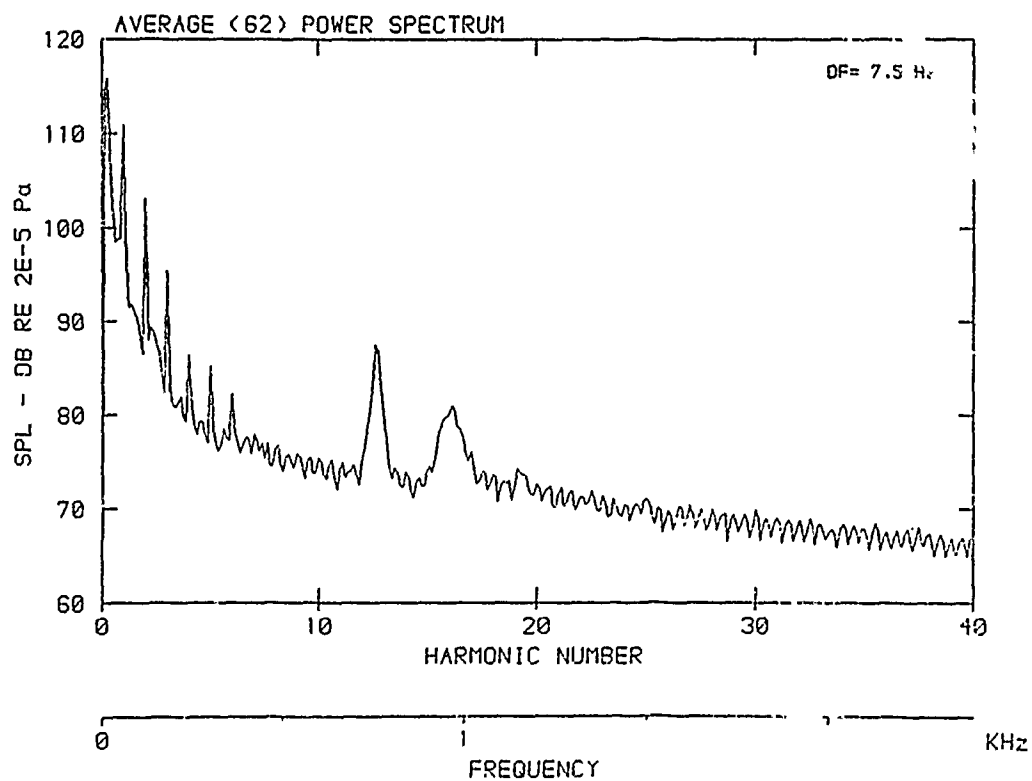
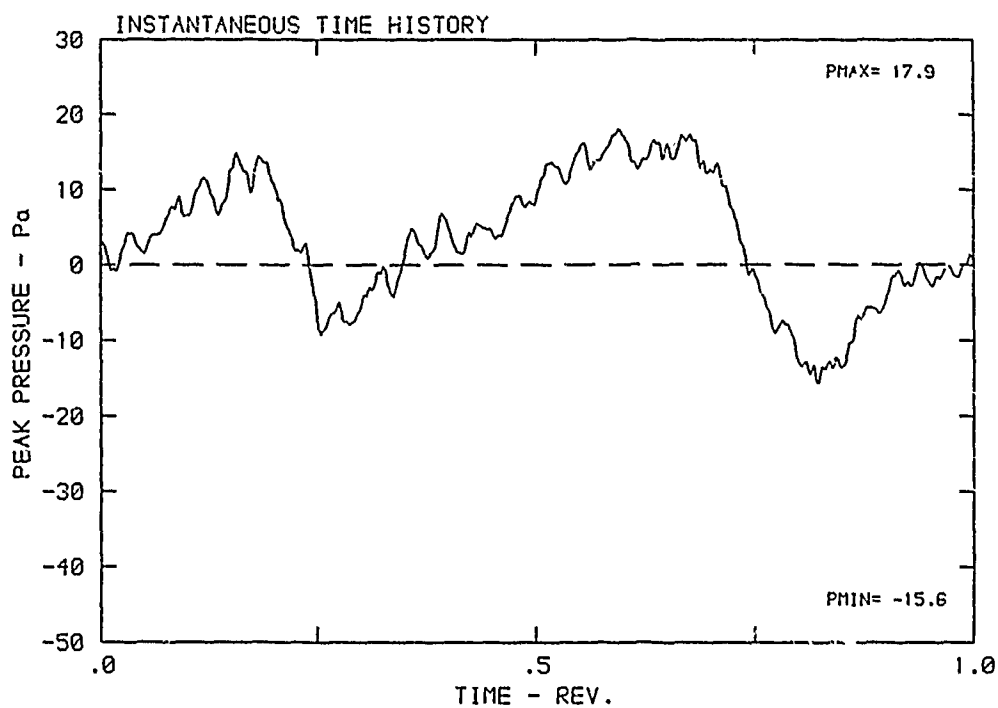
DATA POINT: DN-2 RUN: 93 MP: 7

$\beta$ : 29.0° MH: .5852 n: 1800 rpm v/u: .268  $\phi$ : .0° T: 285.6 K



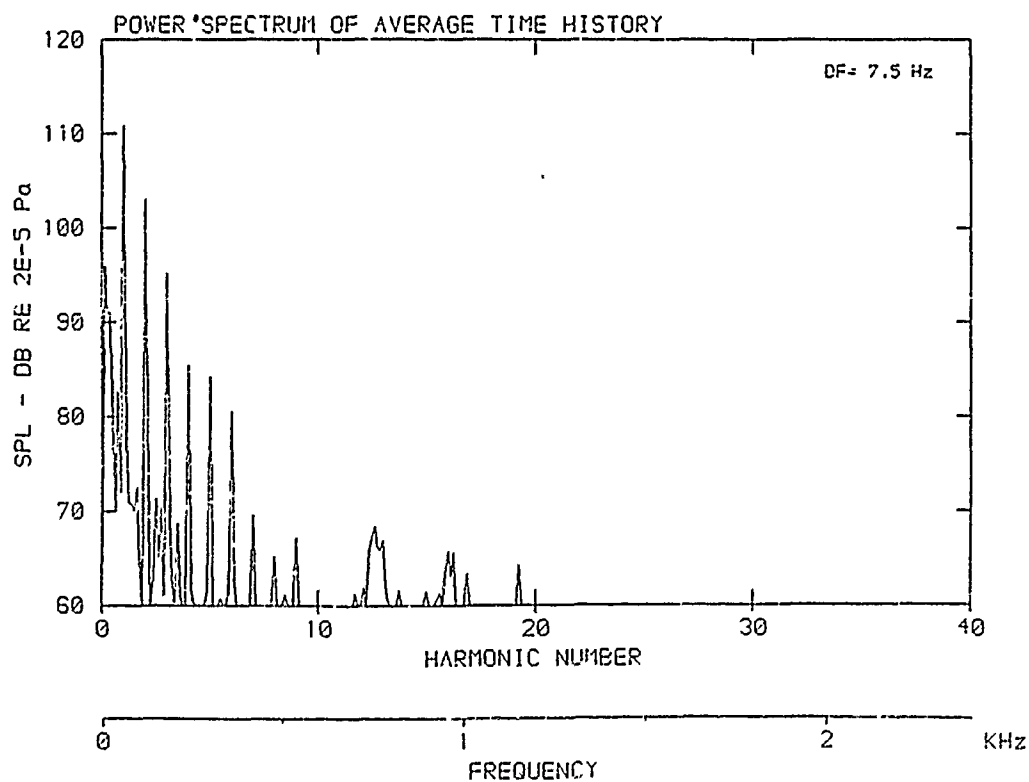
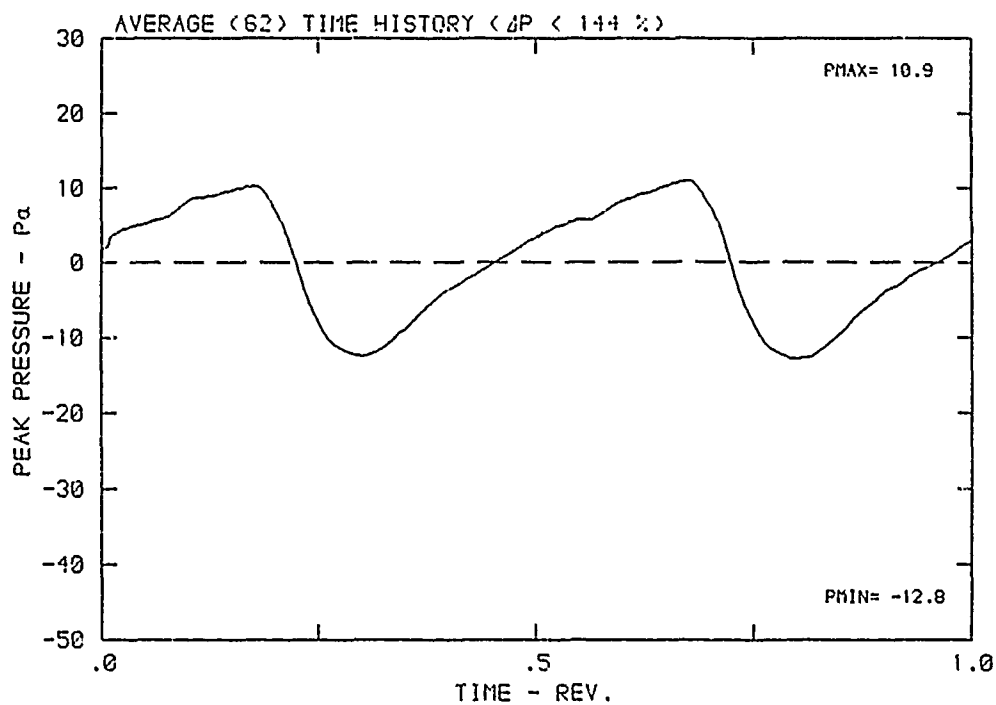
DATA POINT: DN-2    RUN: 93    MP: 9

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm    v/u: .268     $\phi$ : .0°    T: 285.6 K



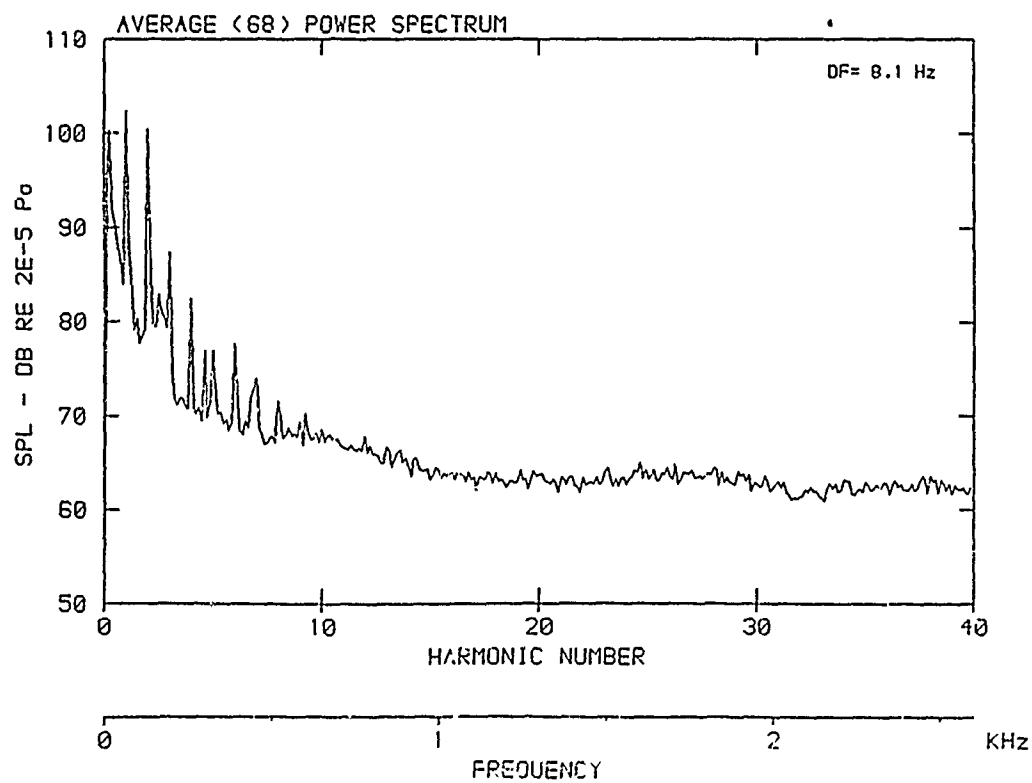
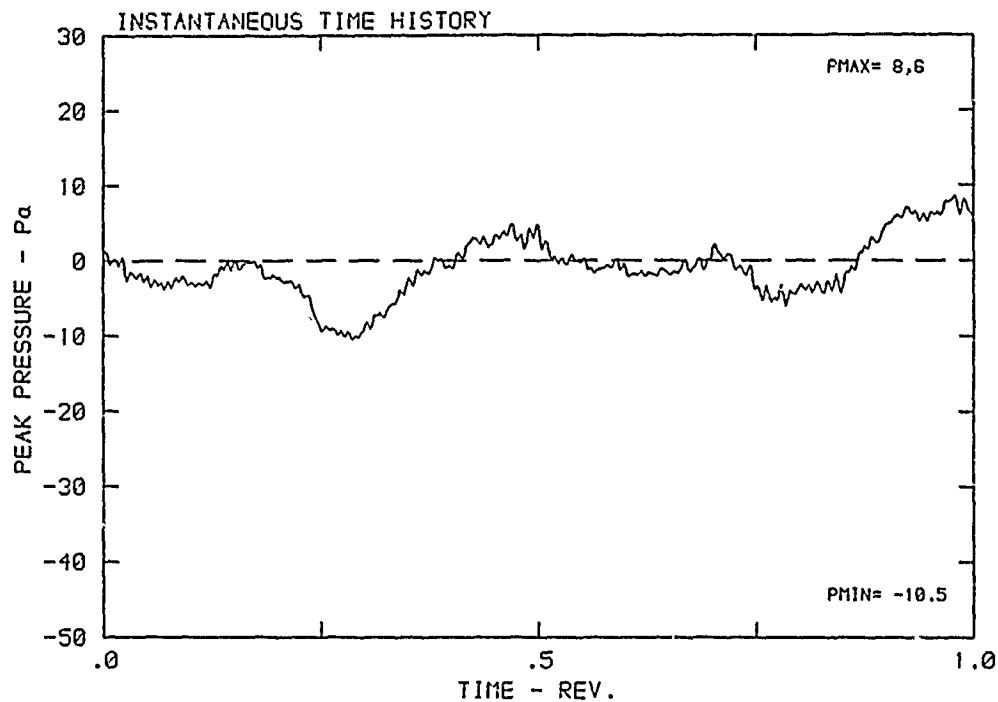
DATA POINT: DN-2    RUN: 93    MP: 9

$\beta$ : 29.0°    MH: .5852    n: 1800 rpm     $v/u$ : .268     $\phi$ : .0°    T: 285.6 K



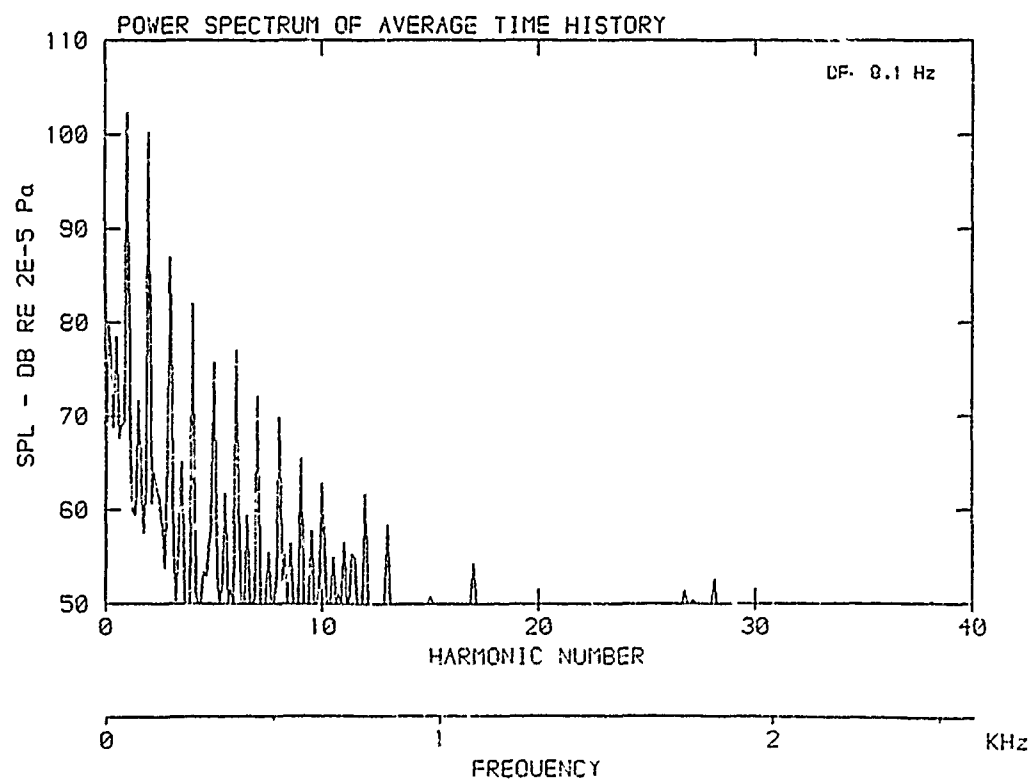
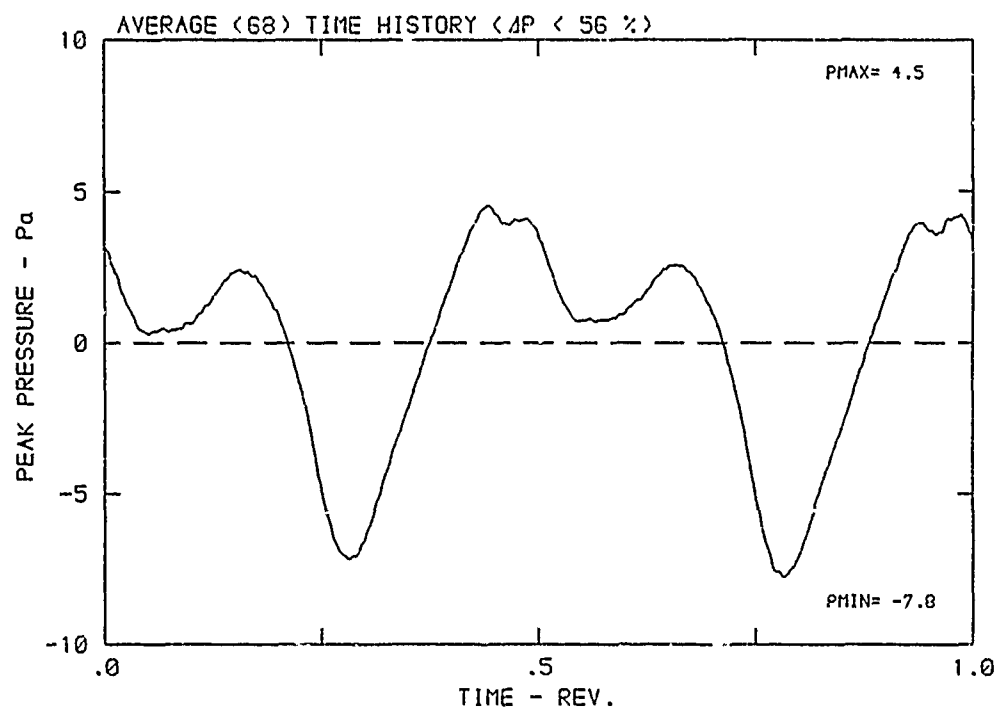
DATA POINT: DN-5    RUN: 92    MP: i

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm     $v/u$ : .246     $\phi$ : .0°    T: 285.4 K



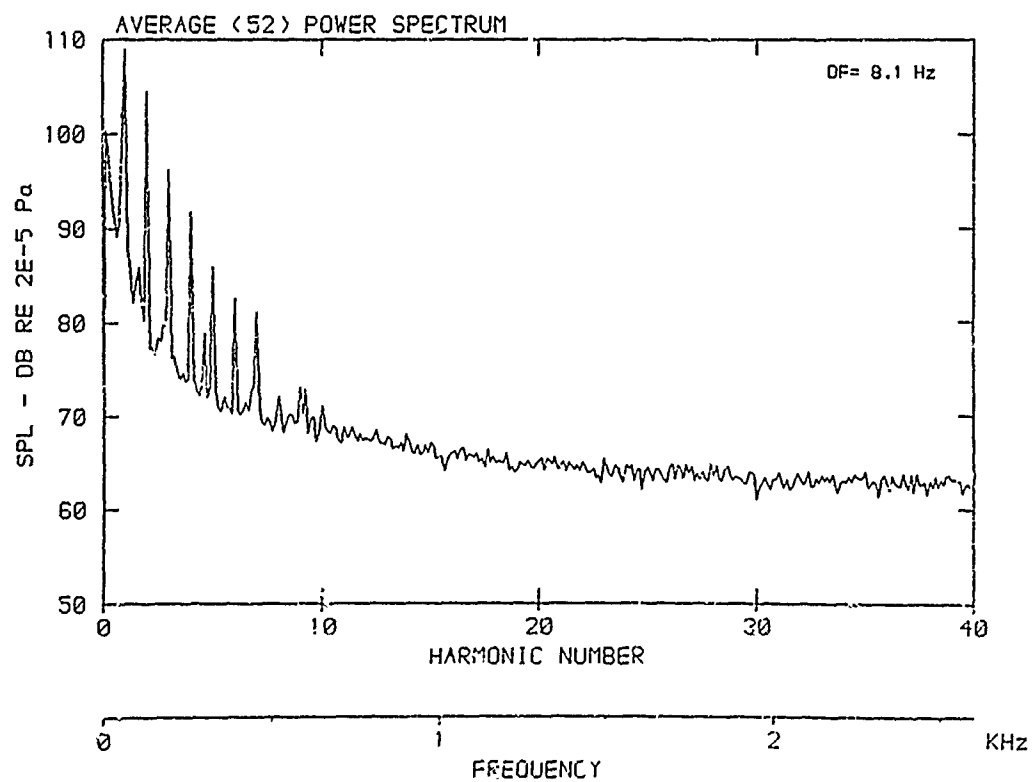
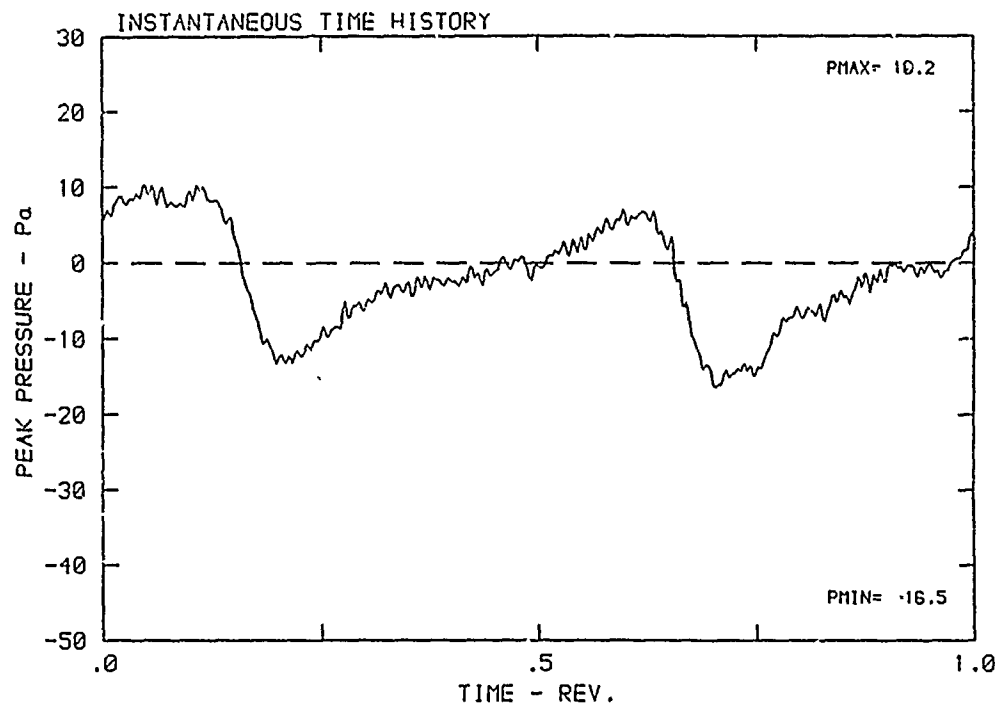
DATA POINT: DN-5 RUN: 92 MP: 1

$\beta$ : 29.0° MH: .6309 n: 1950 rpm v/u: .246  $\phi$ : .0° T: 285.4 K



DATA POINT: DN-5    RUN: 92    MP: 2

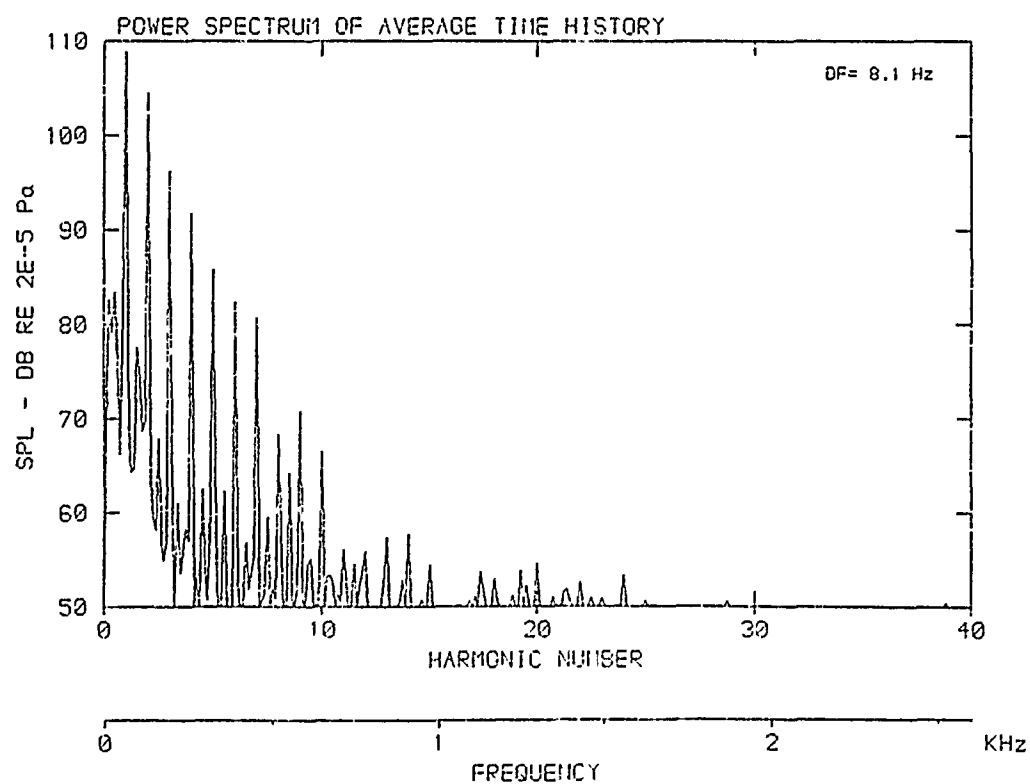
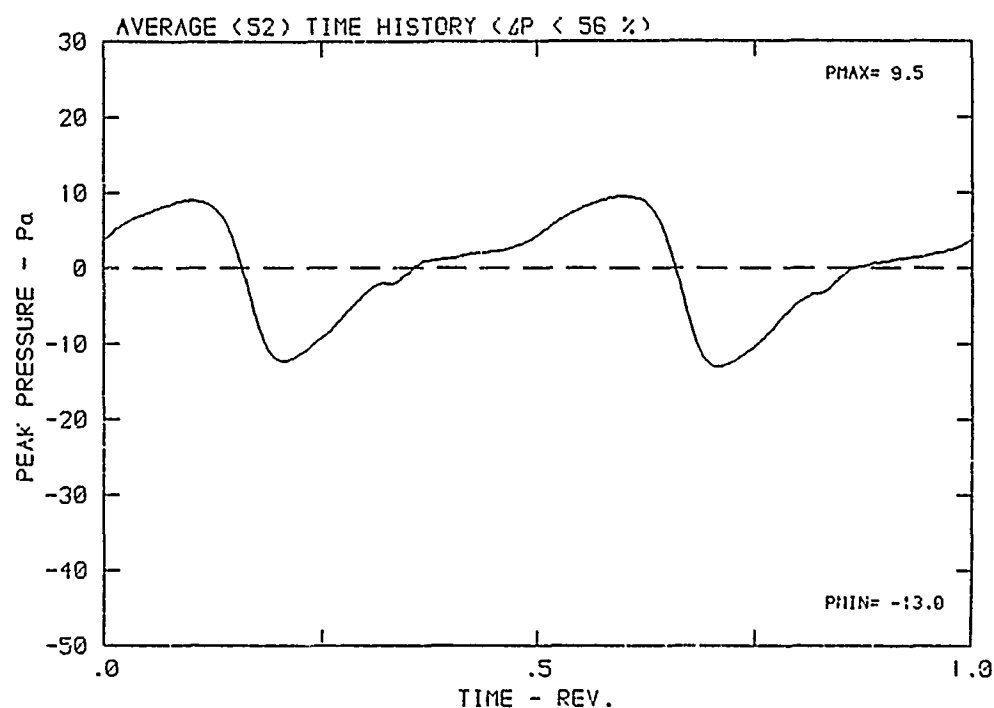
$\beta$ : 29.0°    MH: .6309    n: 1950 rpm    v/u: .246     $\phi$ : .0°    T: 285.4 K





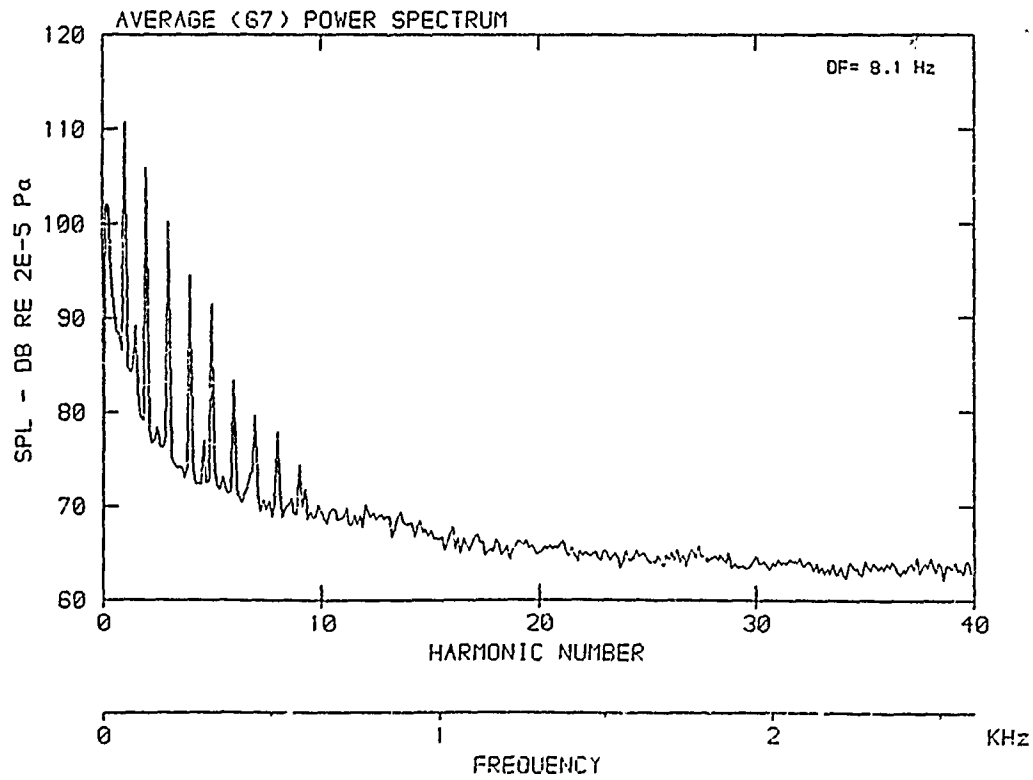
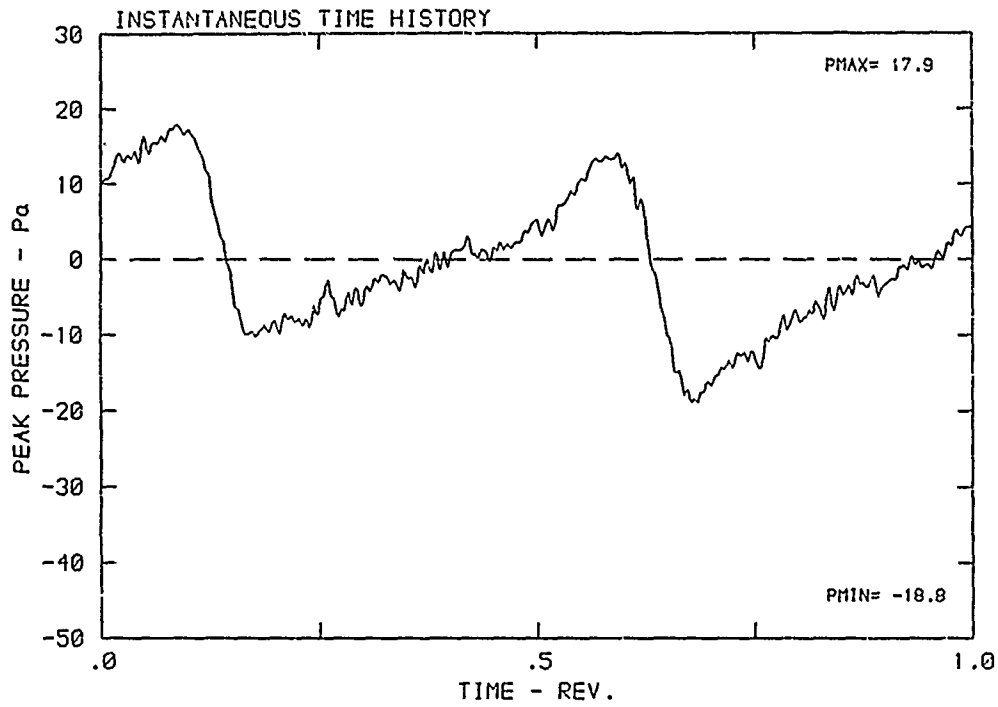
DATA POINT: DN-5    RUN: 92    MP: 2

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm     $v/u$ : .246     $\phi$ : .0°    T: 285.4 K



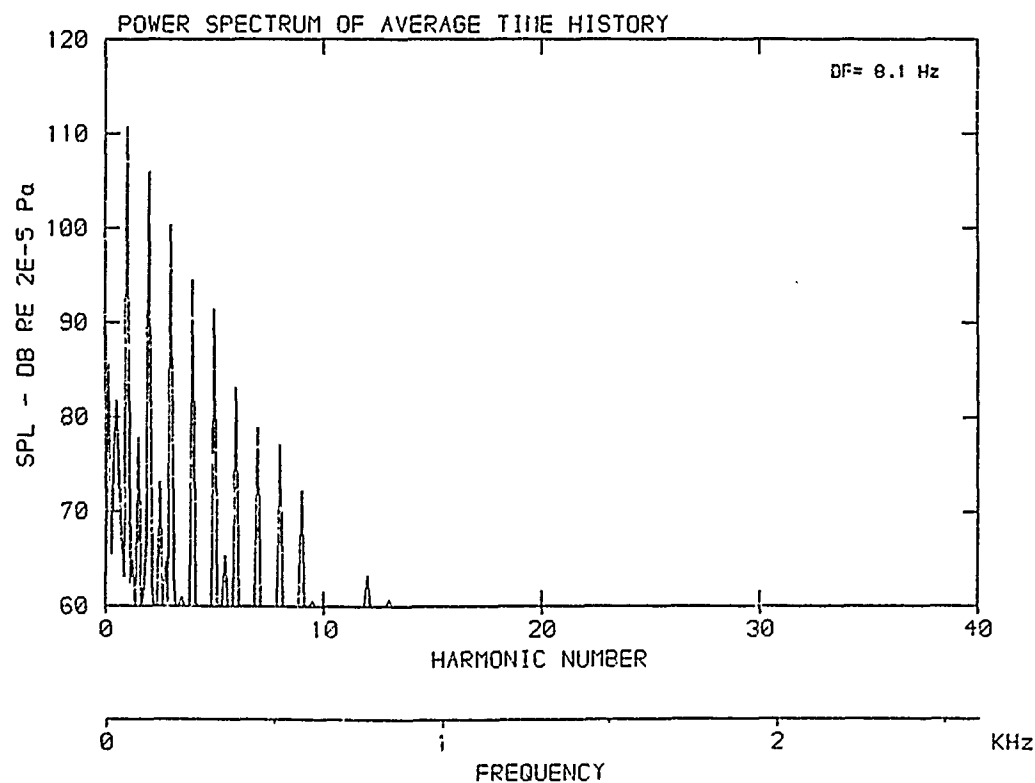
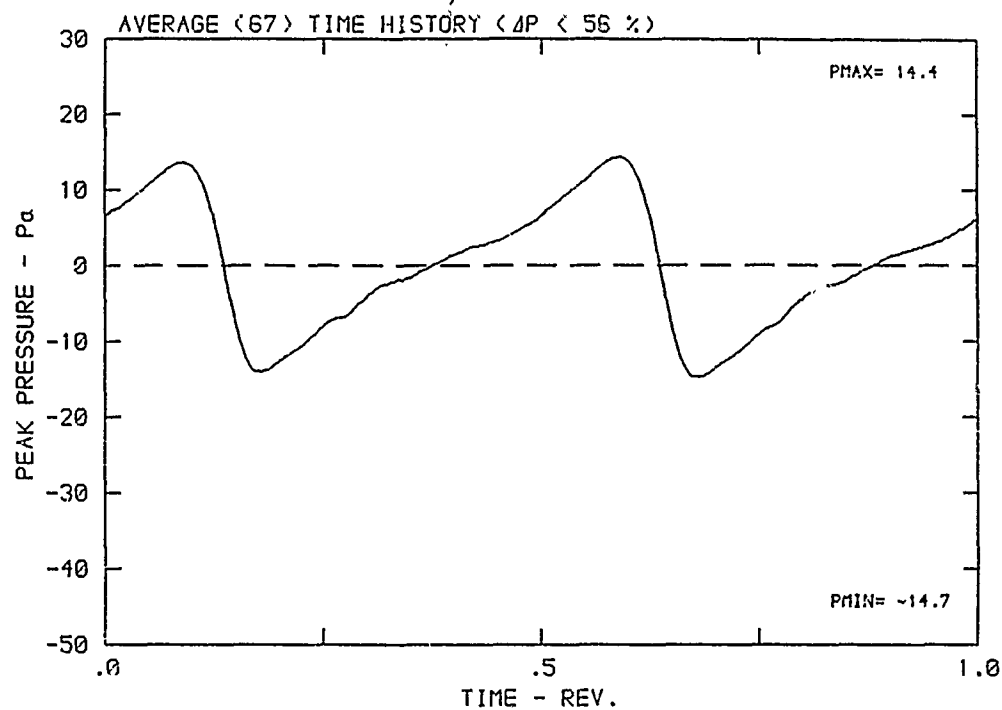
DATA POINT: DN-5      RUN: 92      MP: 3

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm    v/u: .246     $\phi$ : .0°    T: 285.4 K



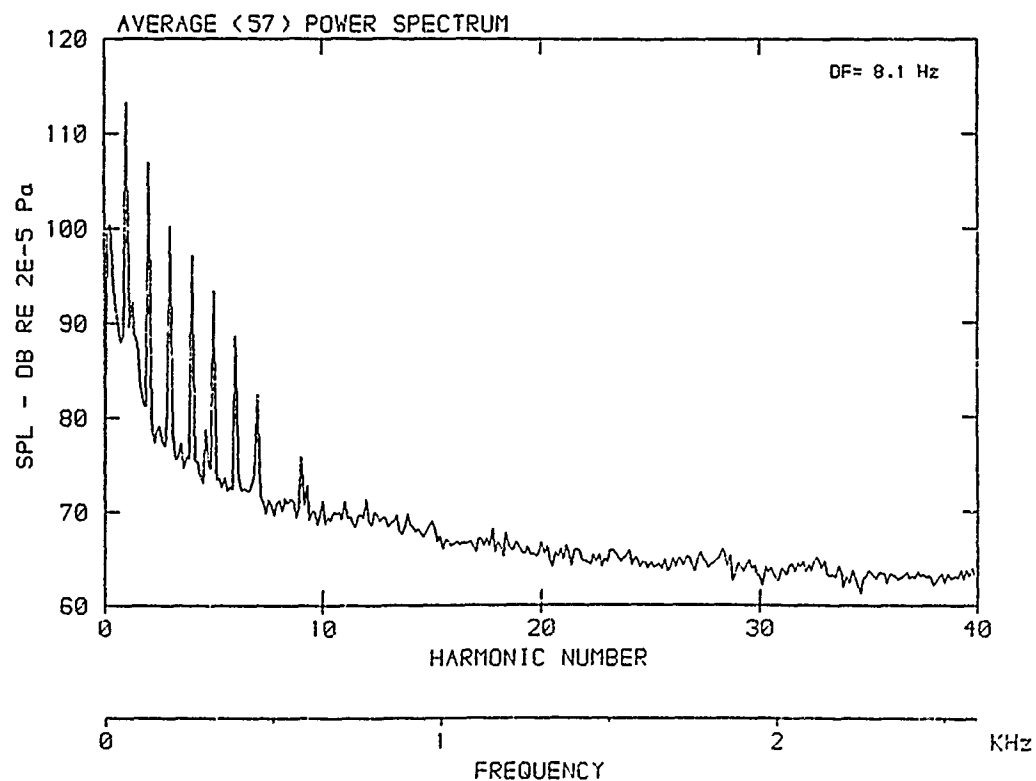
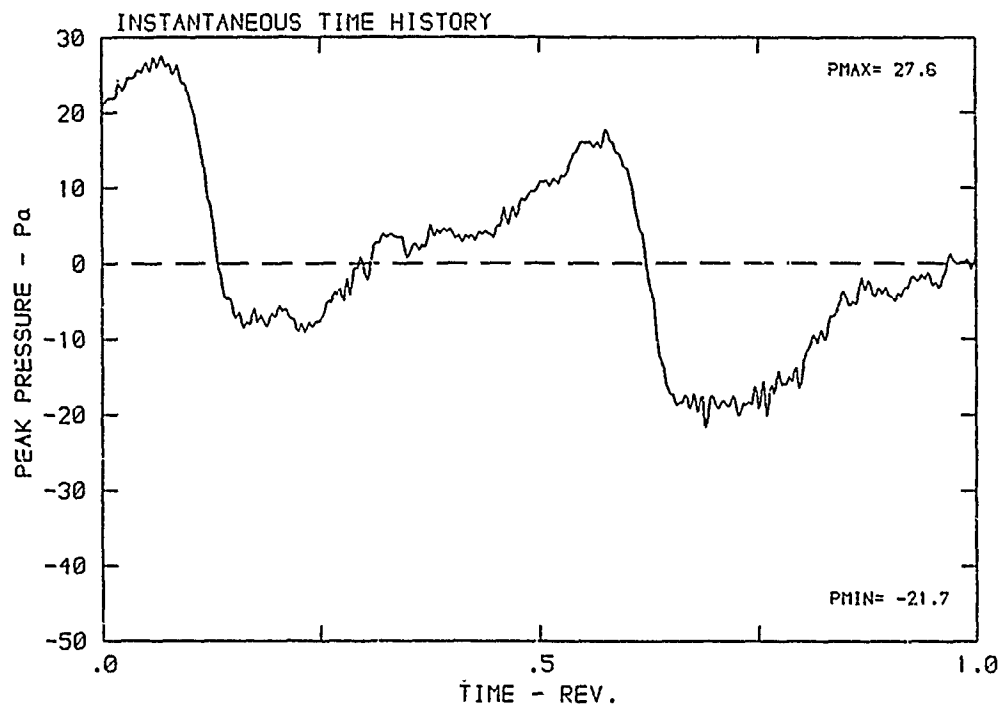
DATA POINT: DN-5 RUN: 92 MP: 3

$\beta$ : 29.0° MH: .6309 n: 1950 rpm  $v/u$ : .246  $\phi$ : .0° T: 285.4 K



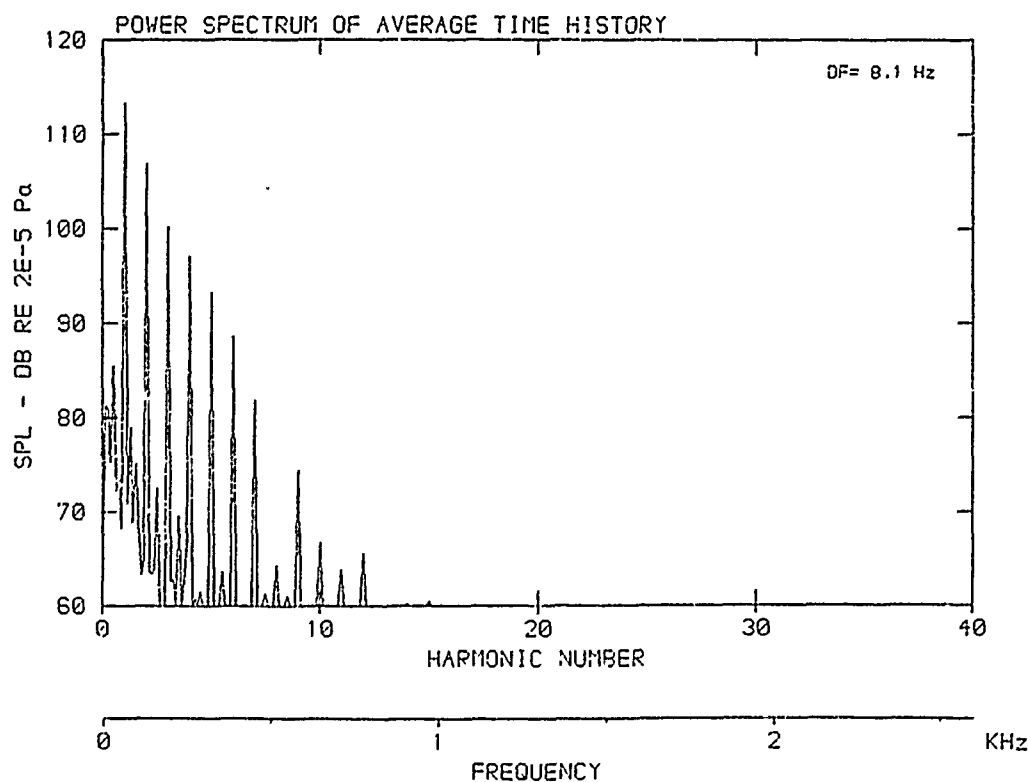
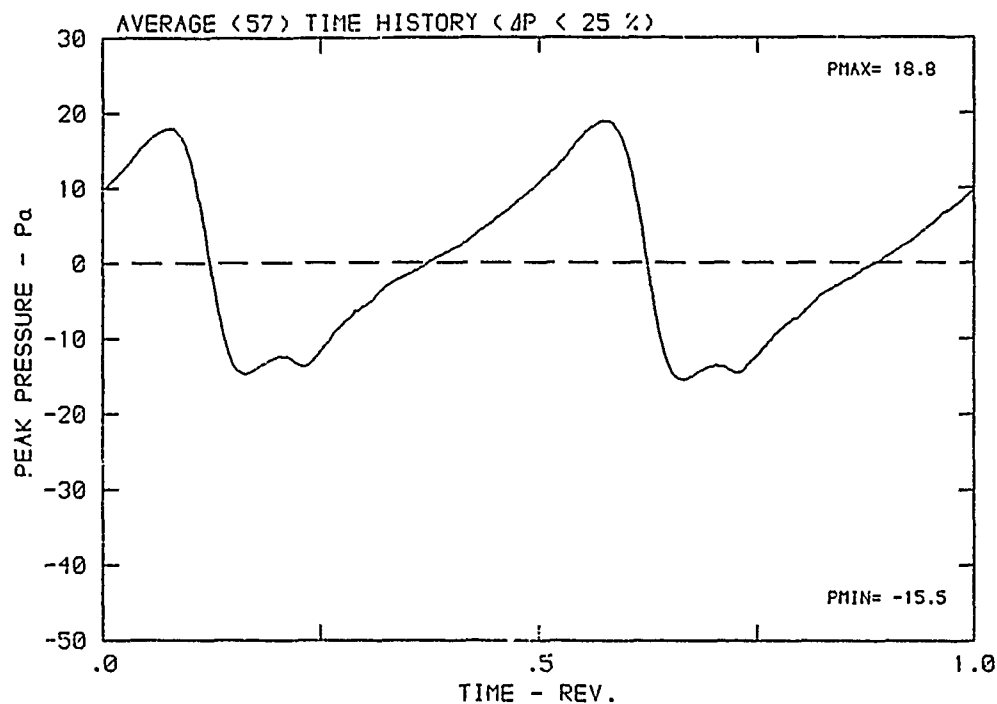
DATA POINT: DN-5    RUN: 92    MP: 4

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm    v/u: .246     $\phi$ : .0°    T: 285.4 K



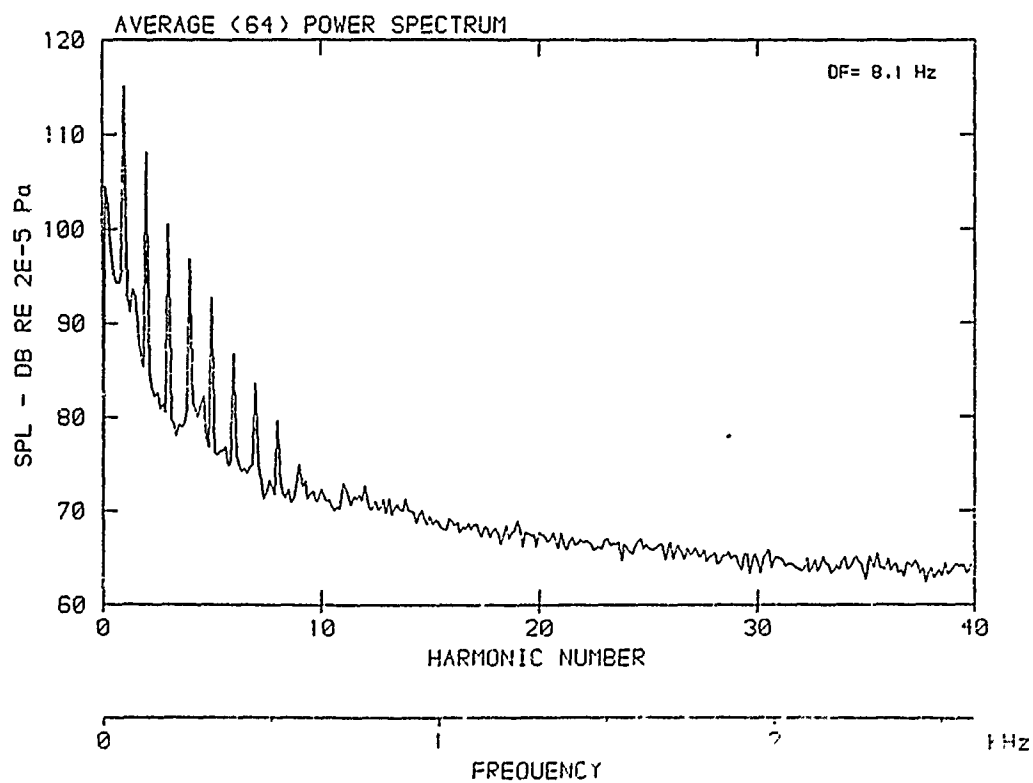
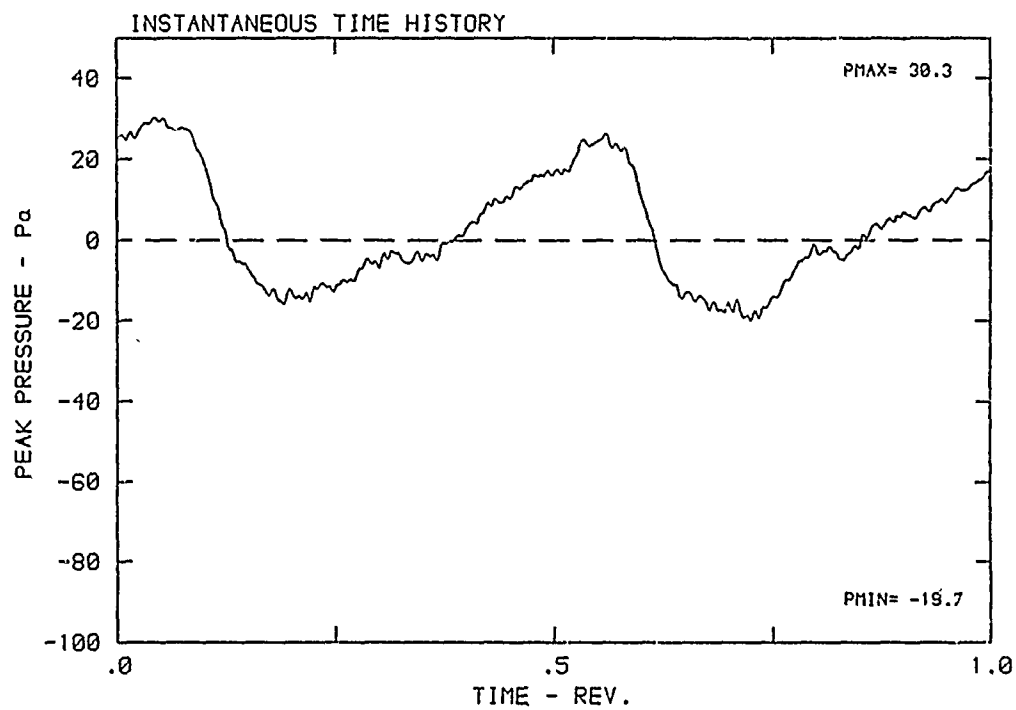
DATA POINT: DN-5 RUN: 92 MP: 4

$\beta$ : 29.0° MH: .6309 n: 1950 rpm v/u: .246  $\phi$ : .0° T: 285.4 K



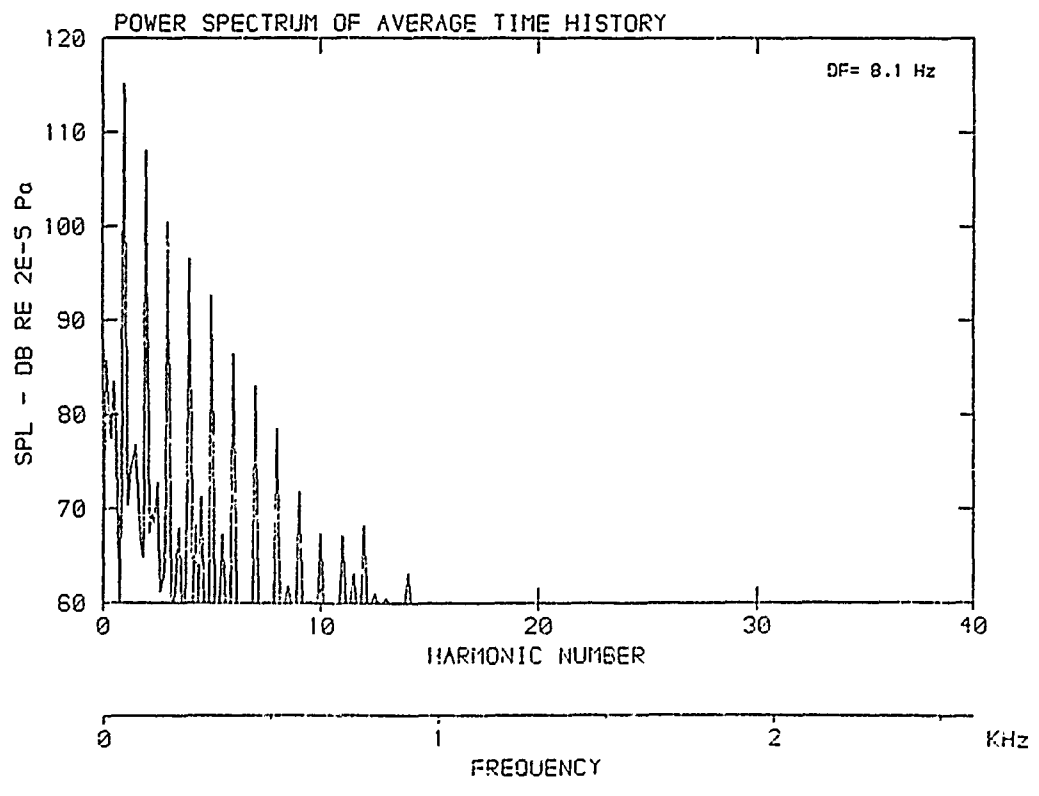
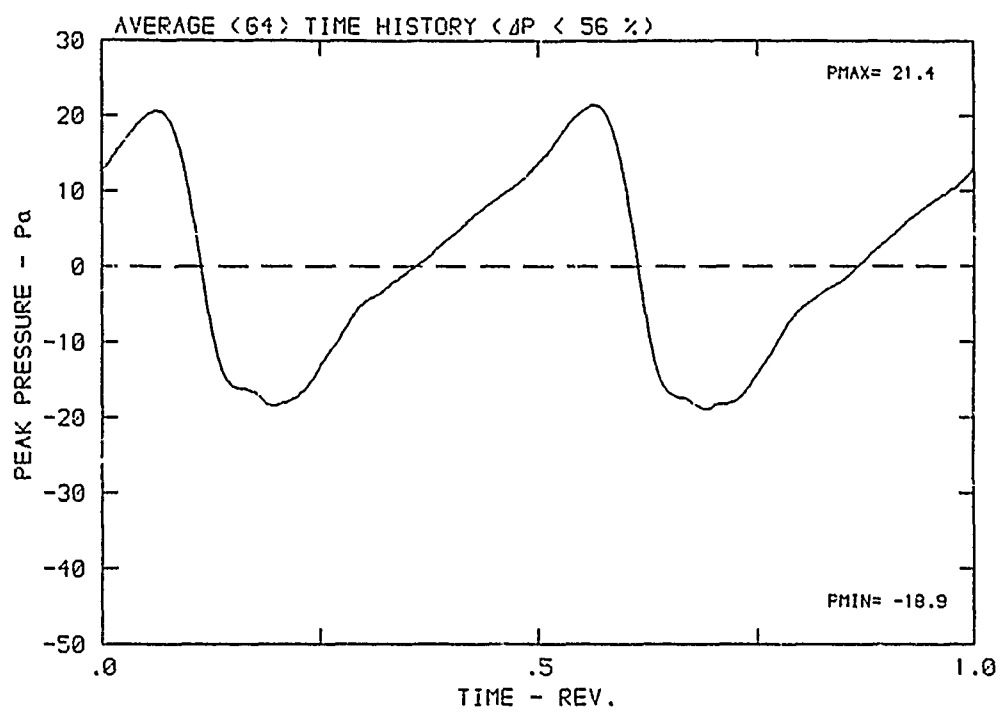
DATA POINT: DN-5    RUN: 92    MP: 5

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm    v/u: .246     $\phi$ : .0°    T: 295.4 K



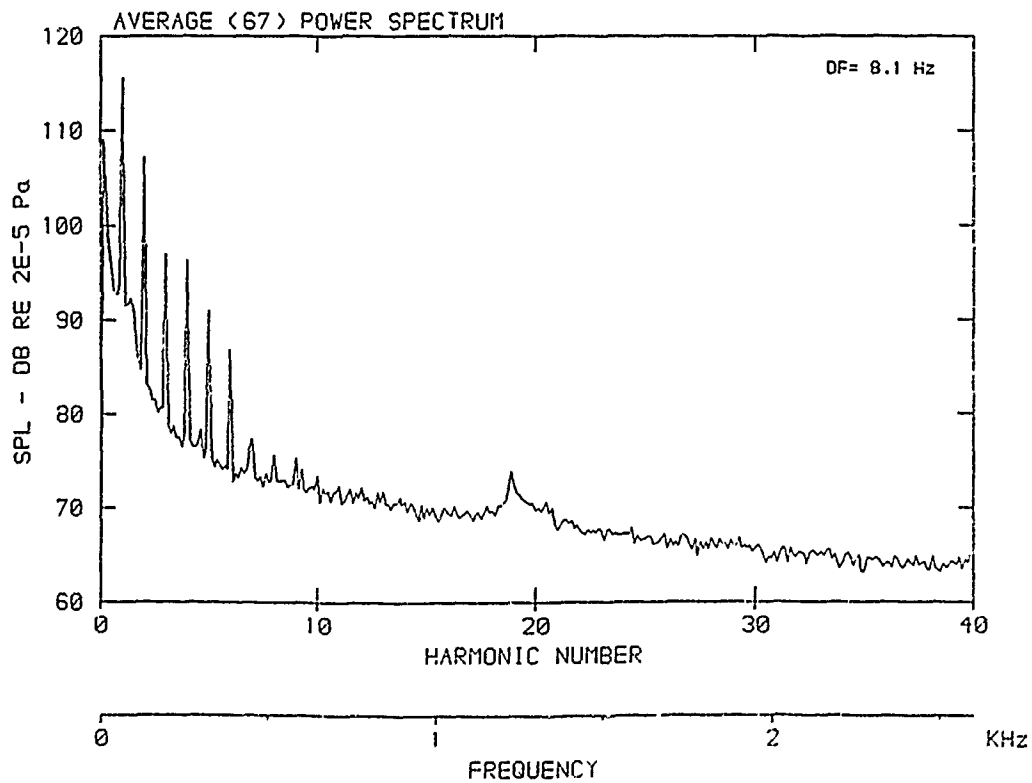
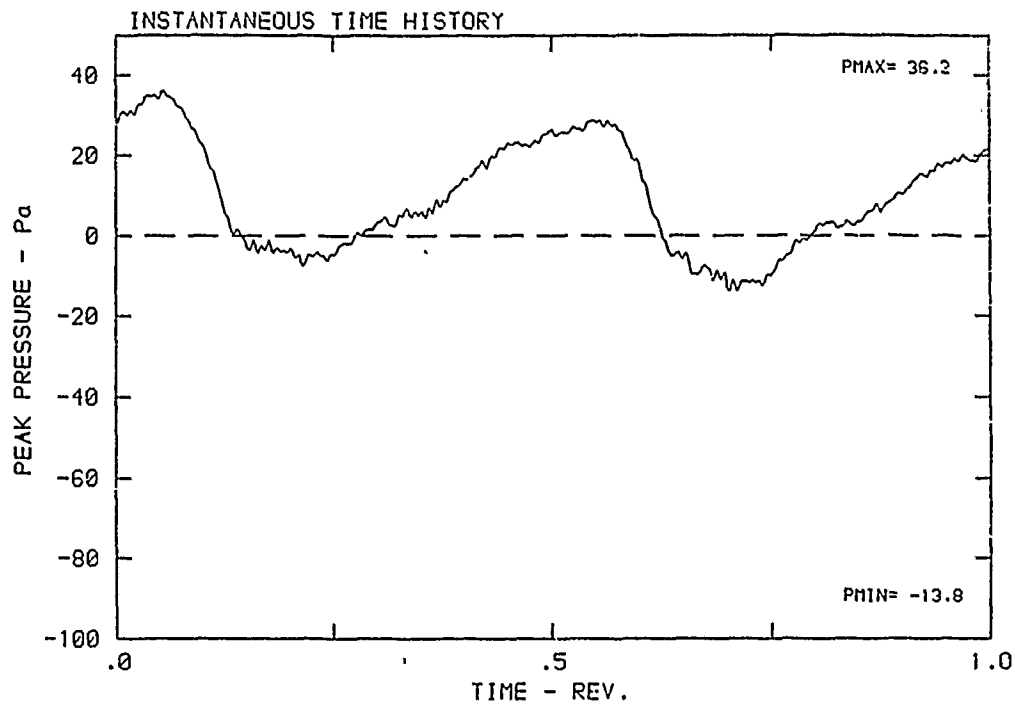
DATA POINT: DN-5    RUN: 92    MP: 5

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm     $v/u$ : .246     $\phi$ : .0°    T: 285.4 K



DATA POINT: DN-5    RUN: 92    MP: E

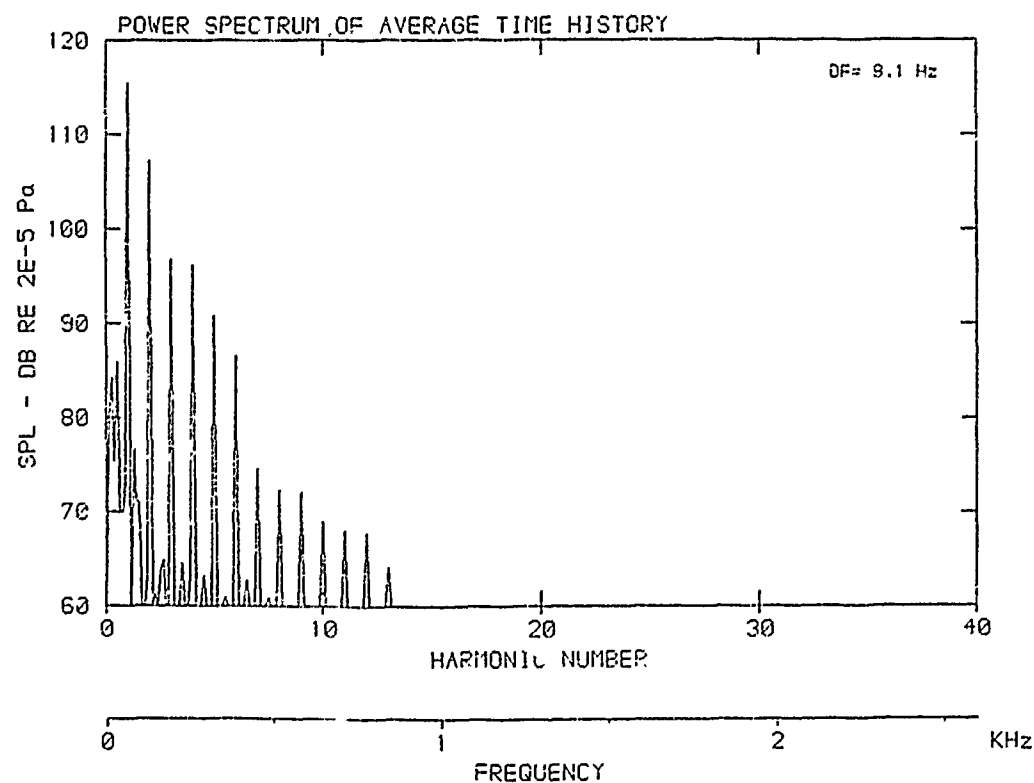
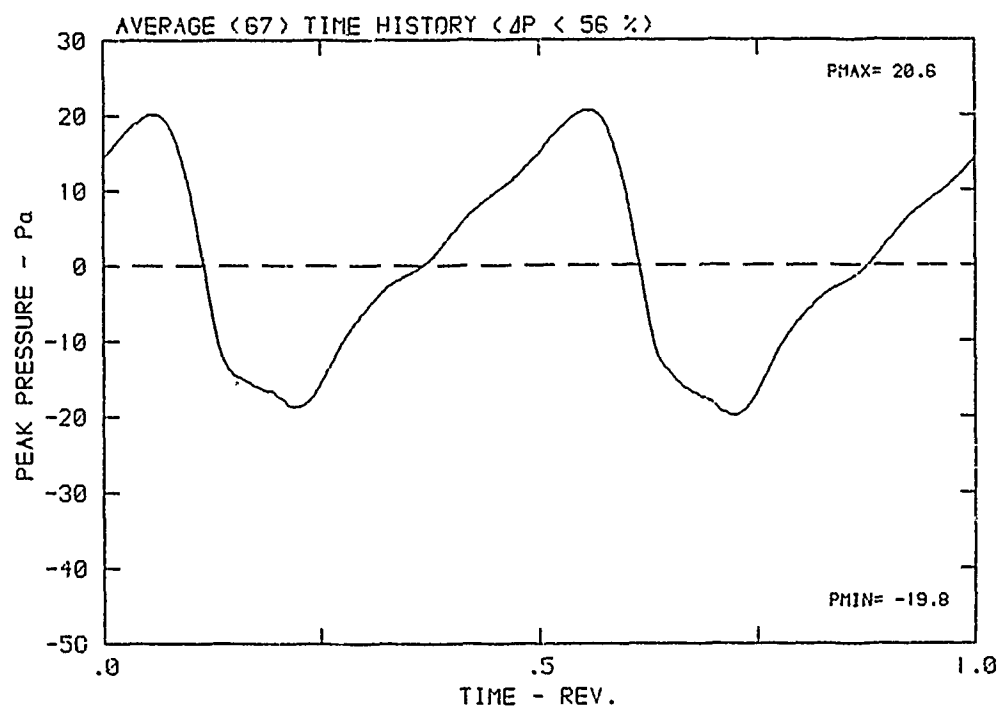
$\beta$ : 29.0°    MH: .6309    n: 1950 rpm     $v/u$ : .246     $\phi$ : .0°    T: 255.4 K





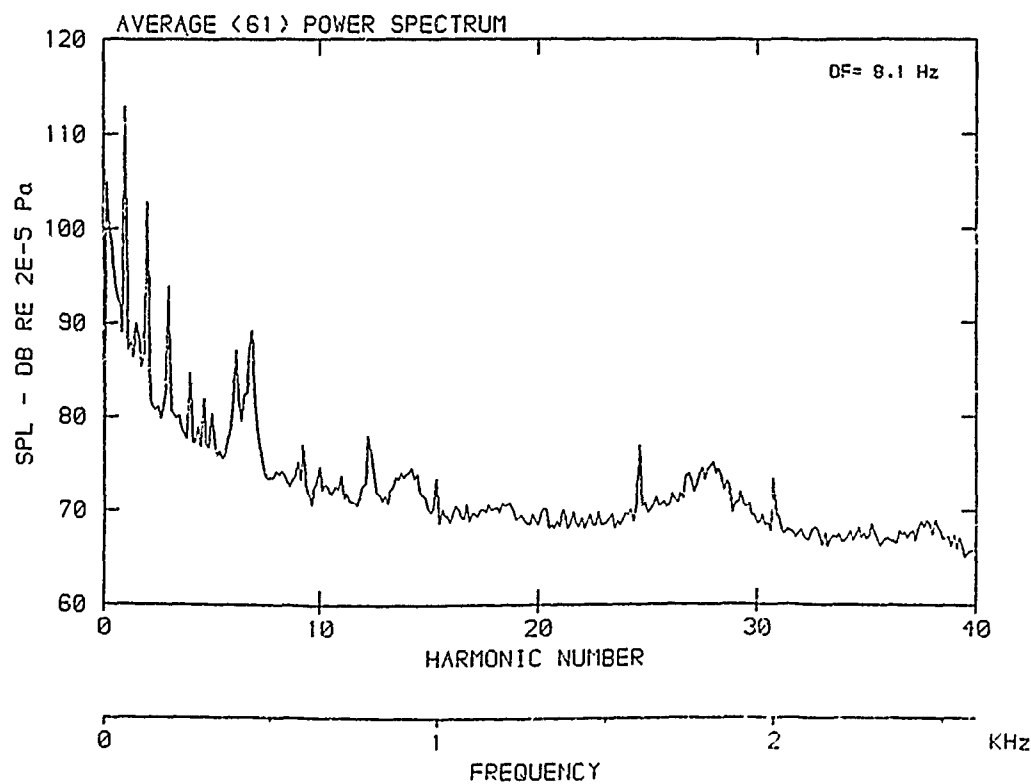
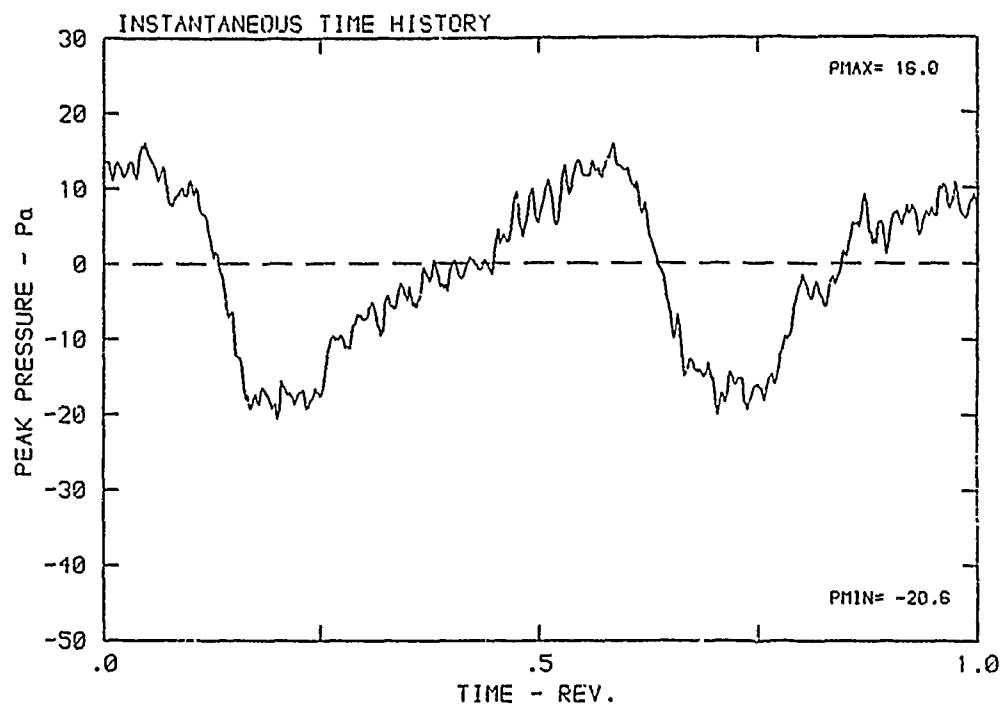
DATA POINT: DN-5    RUN: 92    MP: 6

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm    v/u: .246     $\phi$ : .0°    T: 285.4 K



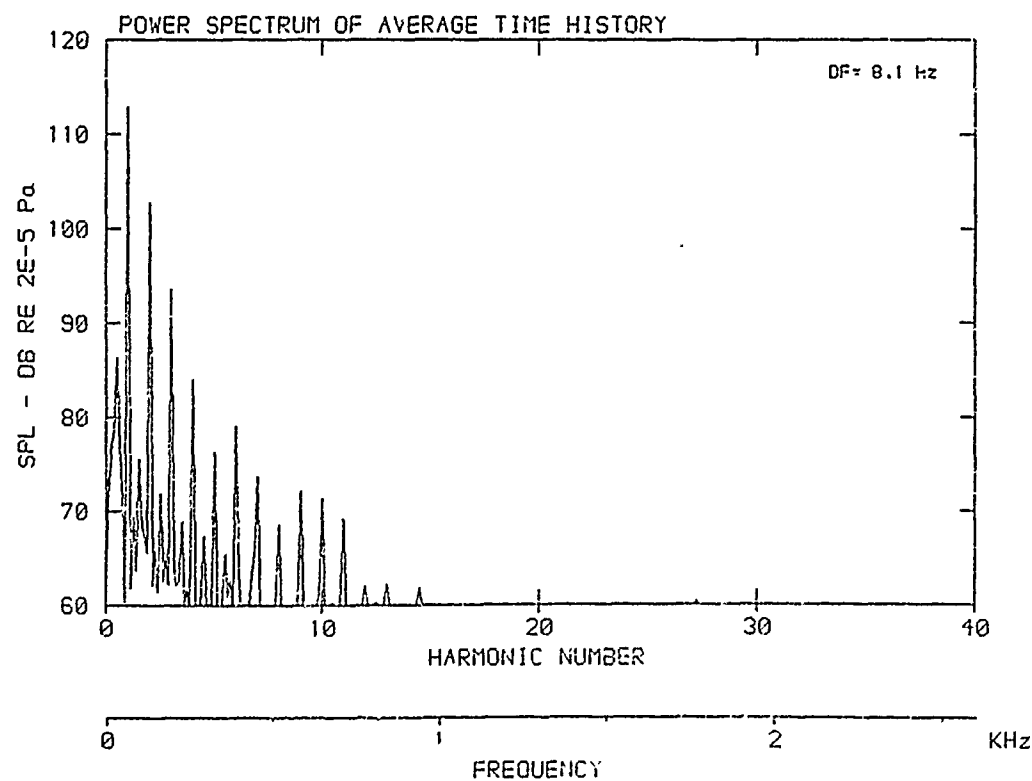
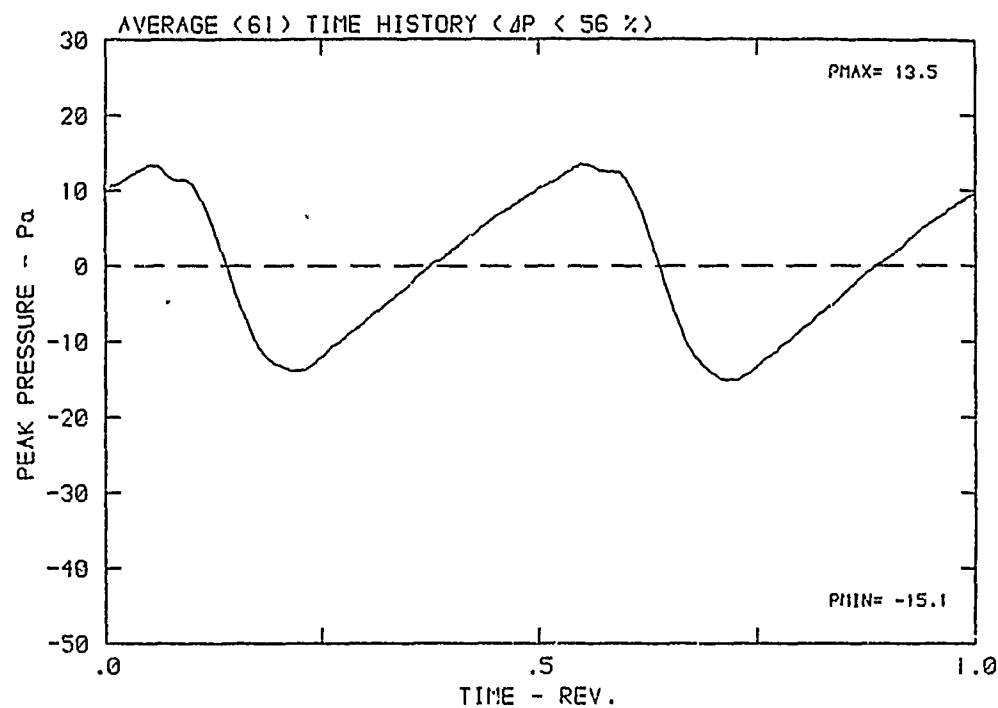
DATA POINT: DN-5    RUN: 92    MP: 7

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm     $v/u$ : .246     $\phi$ : .0°    T: 285.4 K



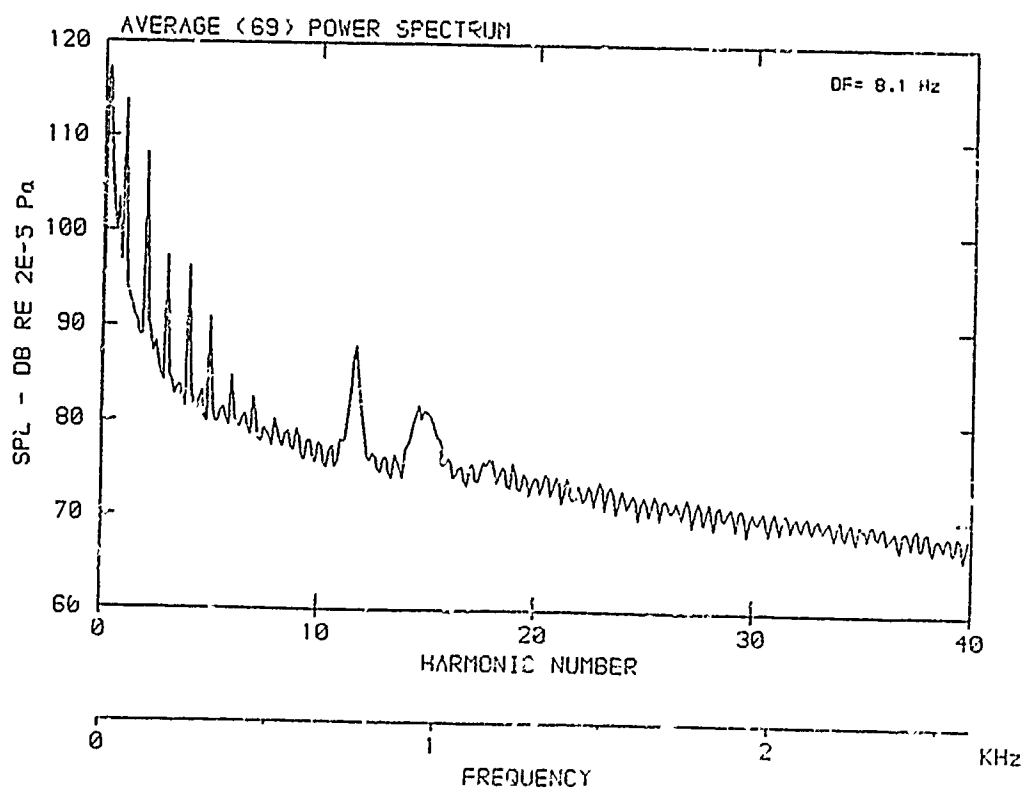
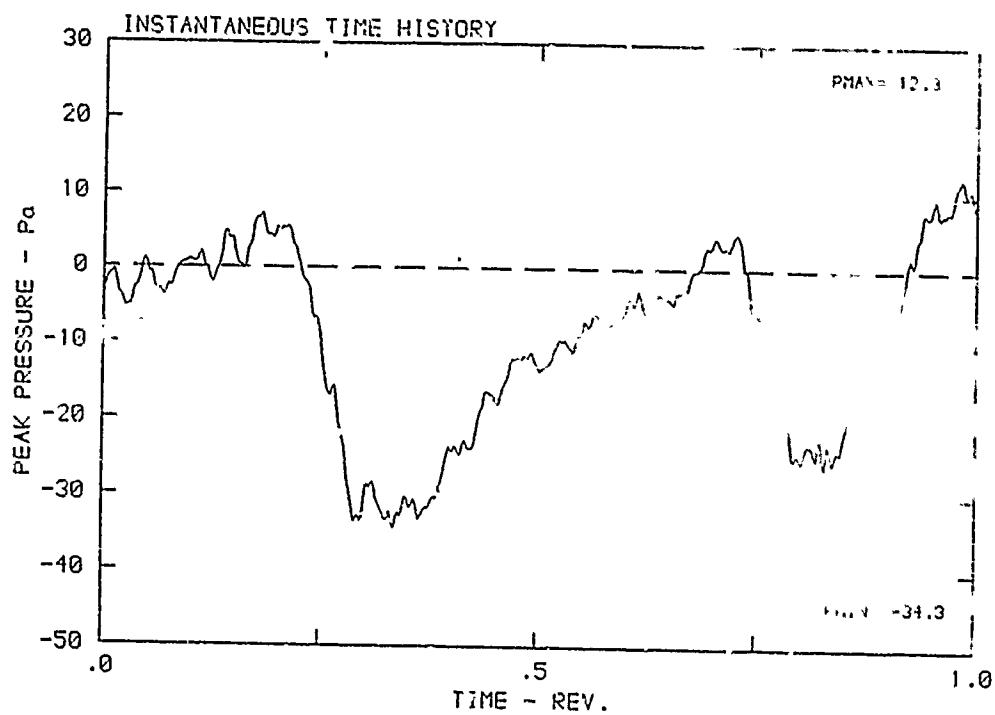
DATA POINT: DN-5 RUN: 92 MP: 7

$\beta$ : 29.0° MH: .6309 n: 1950 rpm v/u: .246  $\phi$ : .0° T: 285.4 K



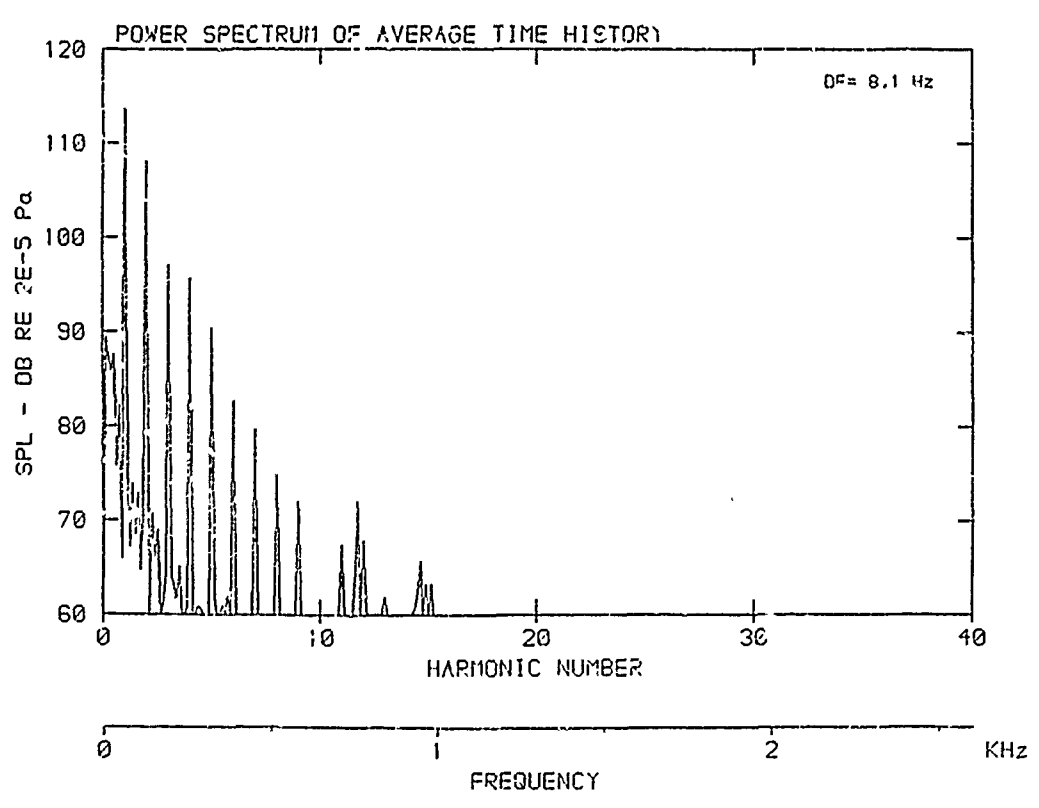
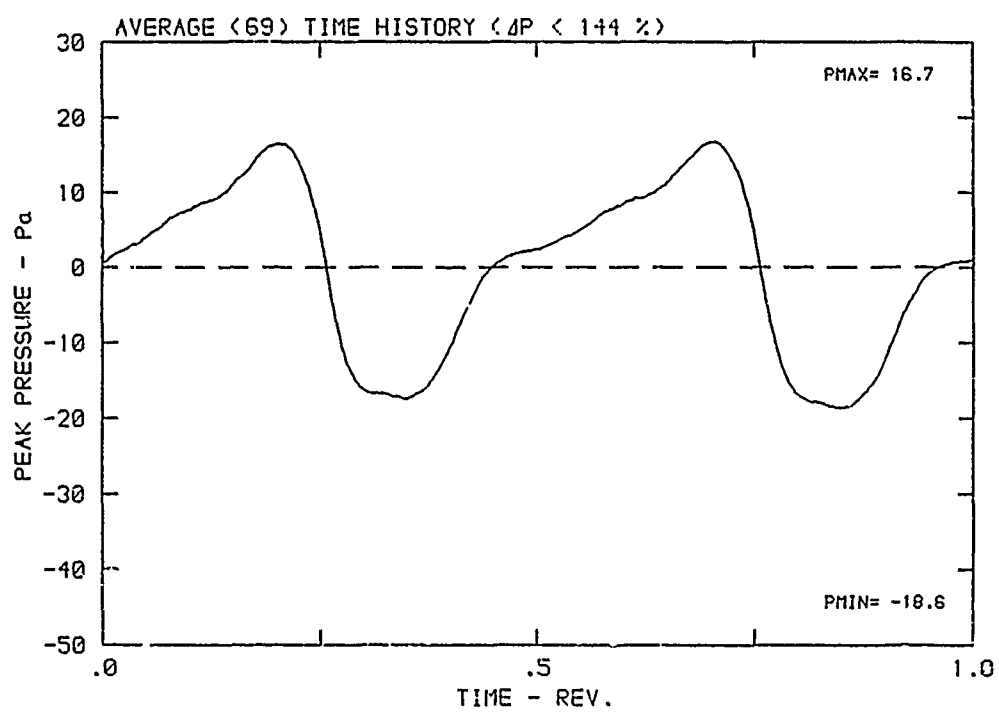
DATA POINT: DN-5 RUN: 1111 IP: 1

$\beta$ : 29.0° MH: .6309 n: 1950 rpm Vtu: .218



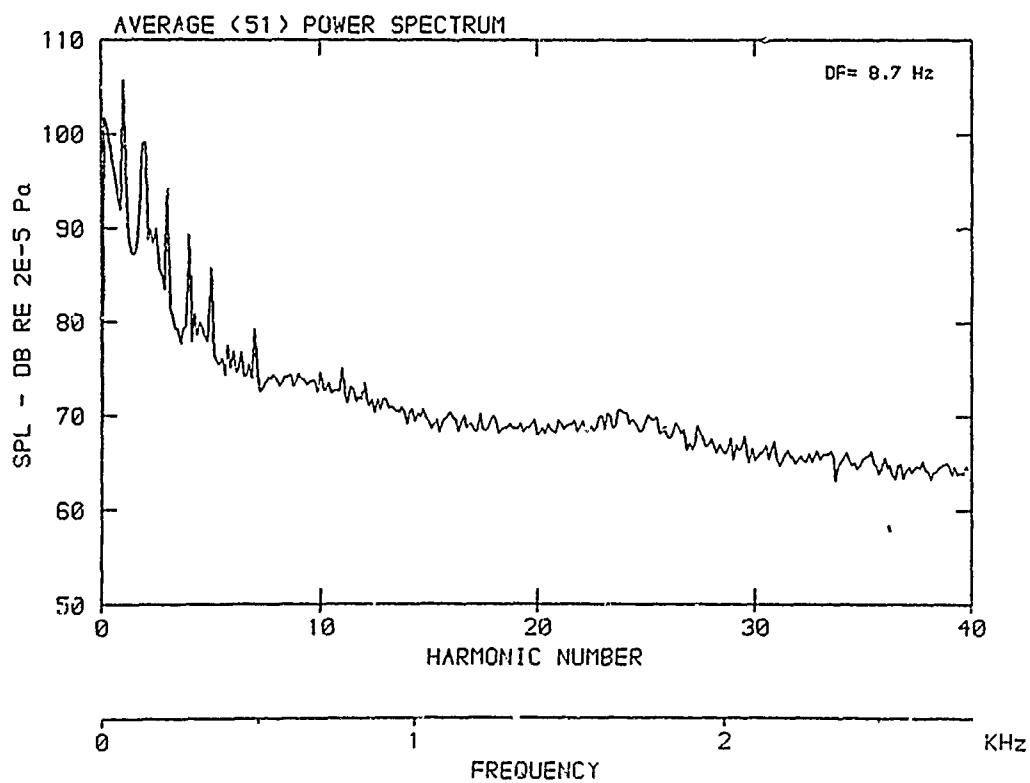
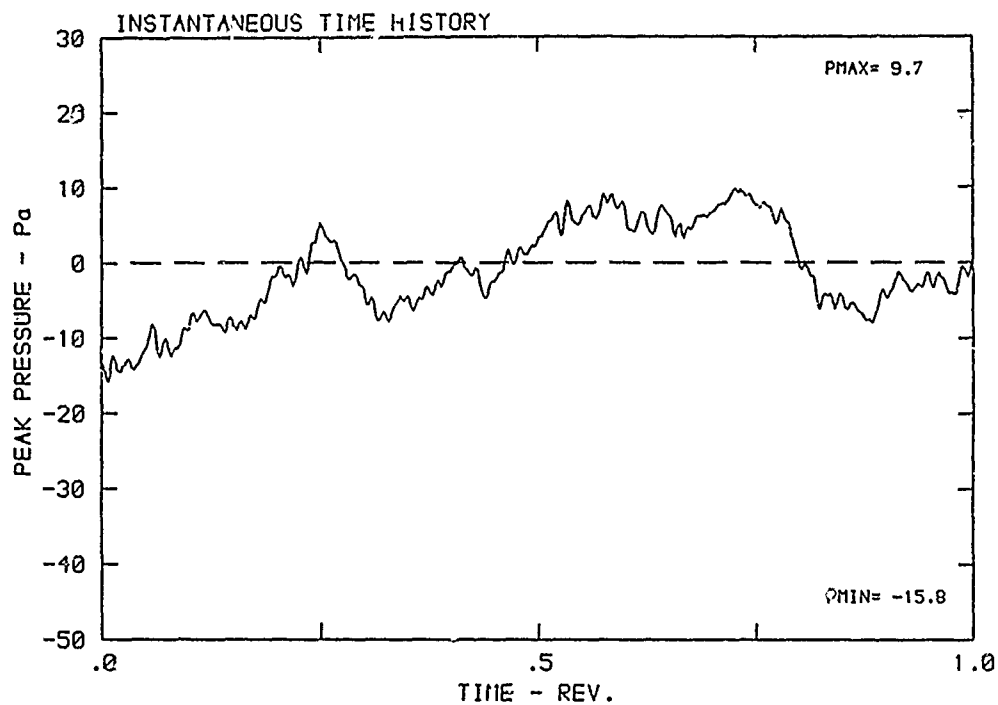
DATA POINT: DN-5      RUN: 92      MP: 9

$\beta$ : 29.0°    MH: .6309    n: 1950 rpm    v/u: .246     $\phi$ : .0°    T: 285.4 K



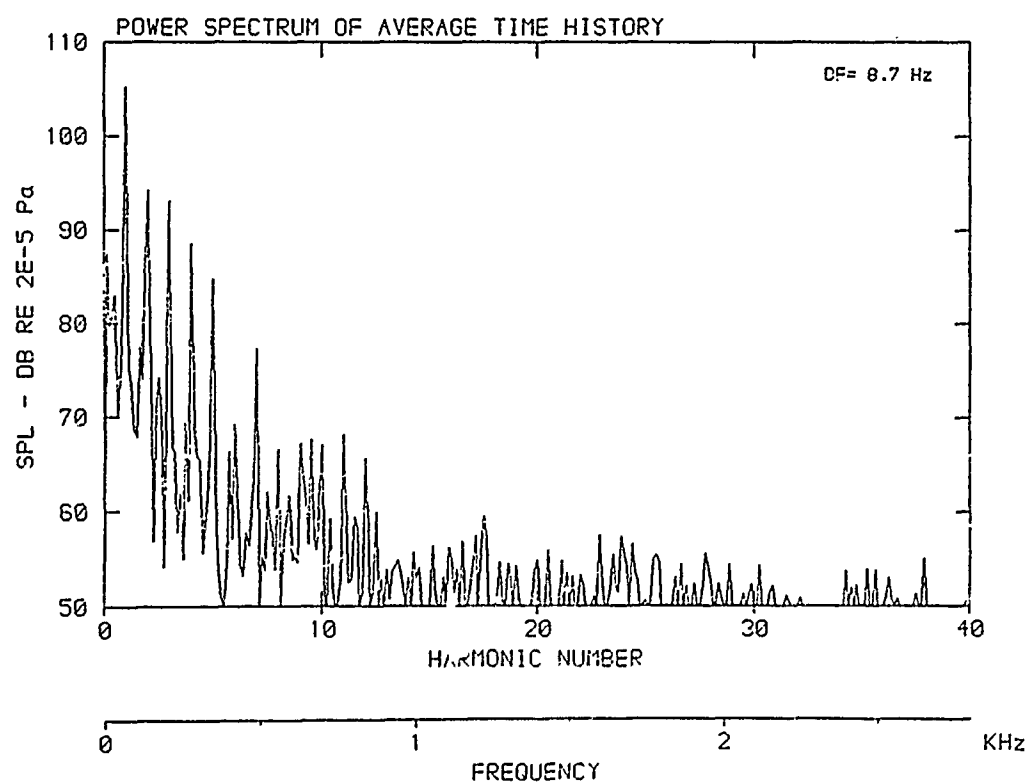
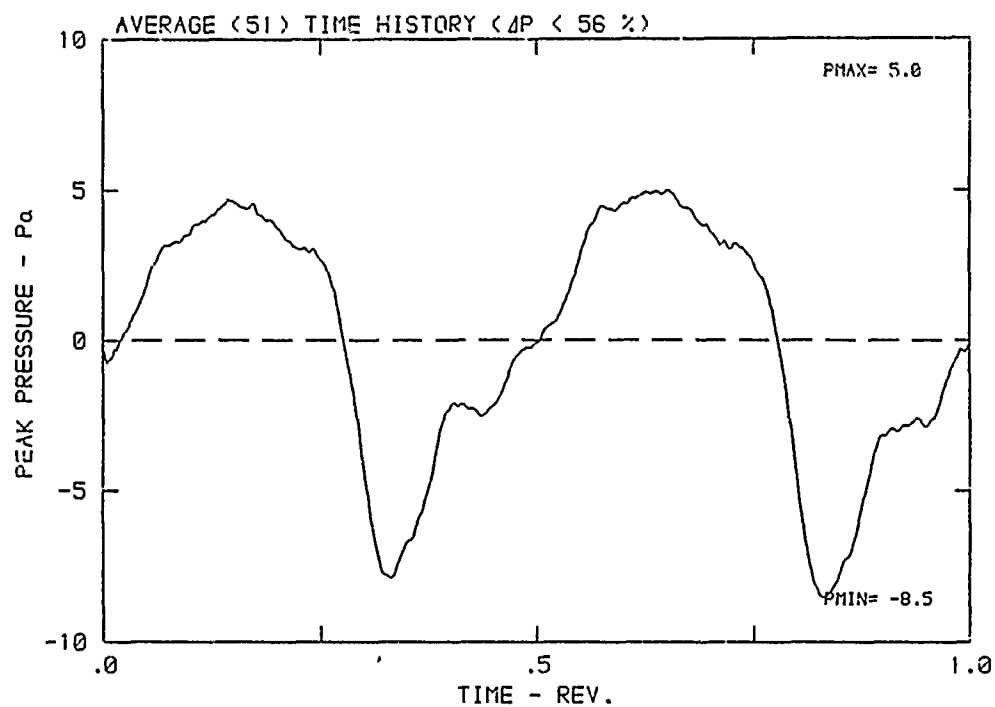
DATA POINT: DN-3      RUN: 91      MF: 1

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



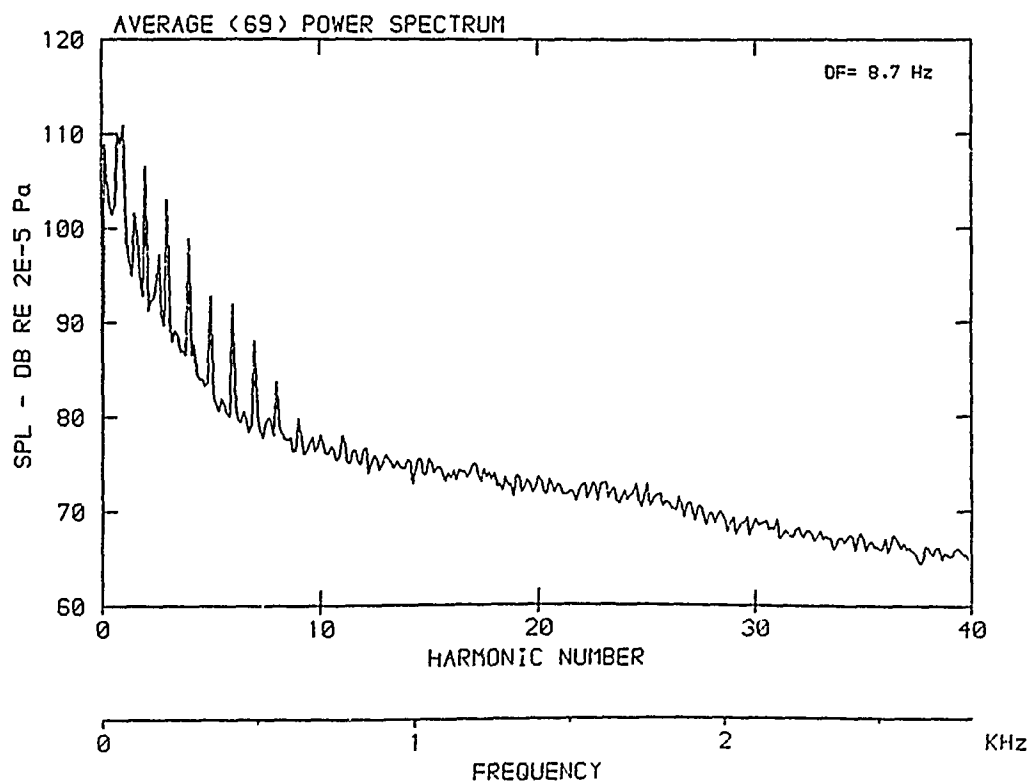
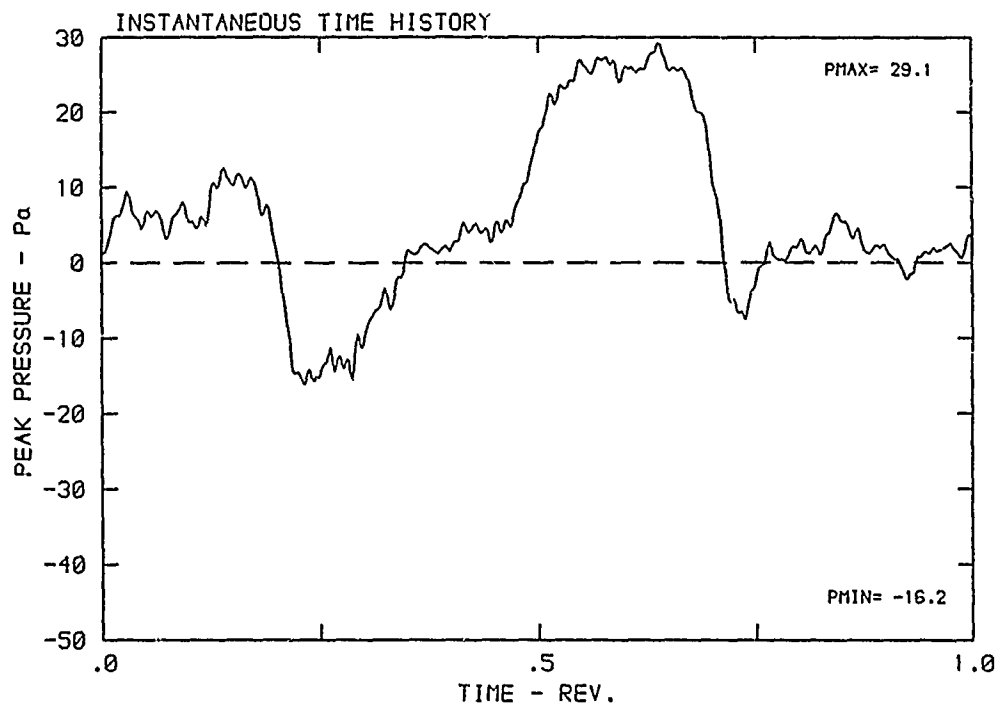
DATA POINT: DN-3    RUN: 91    MP: 1

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



DATA POINT: DN-3      RUN: 91      MP: 2

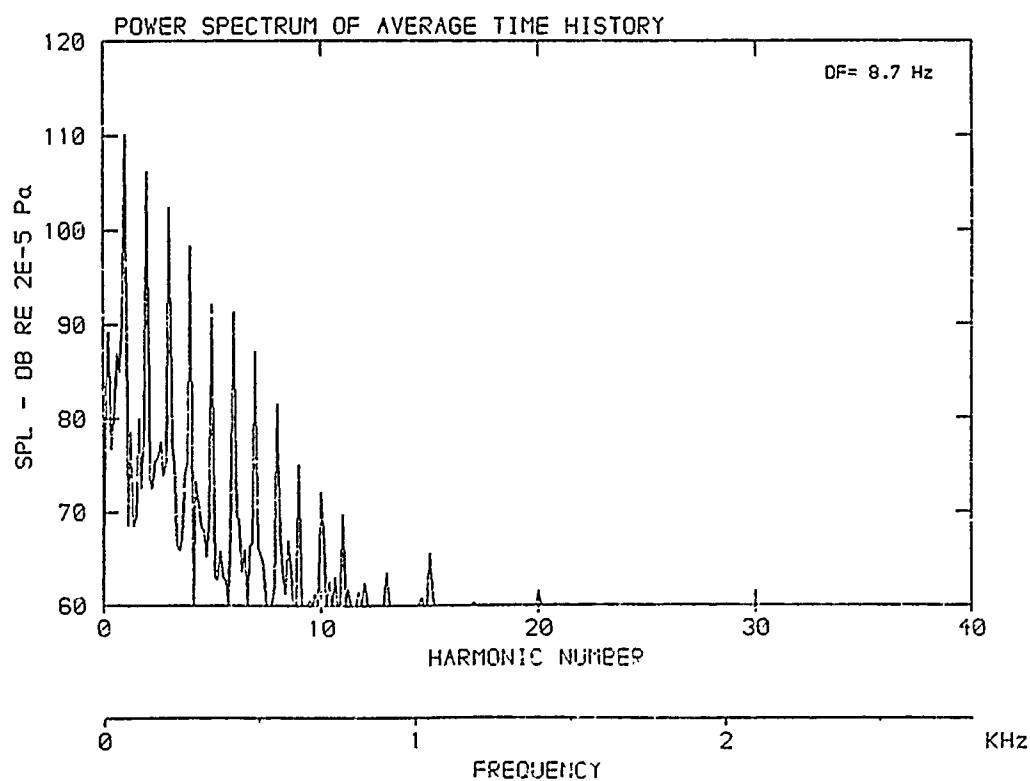
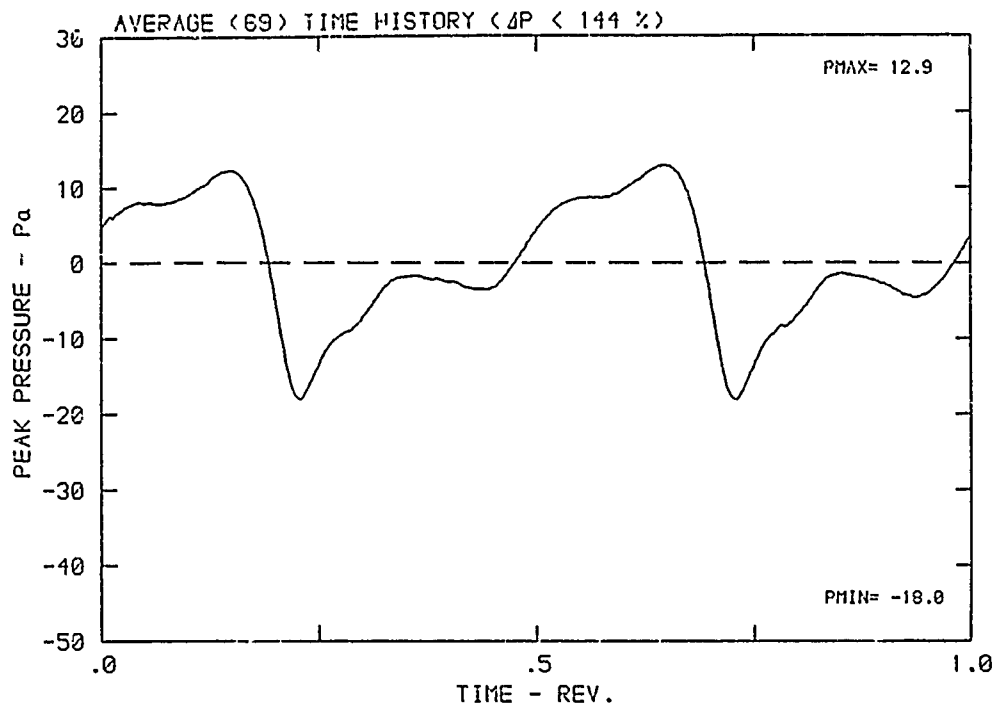
$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K





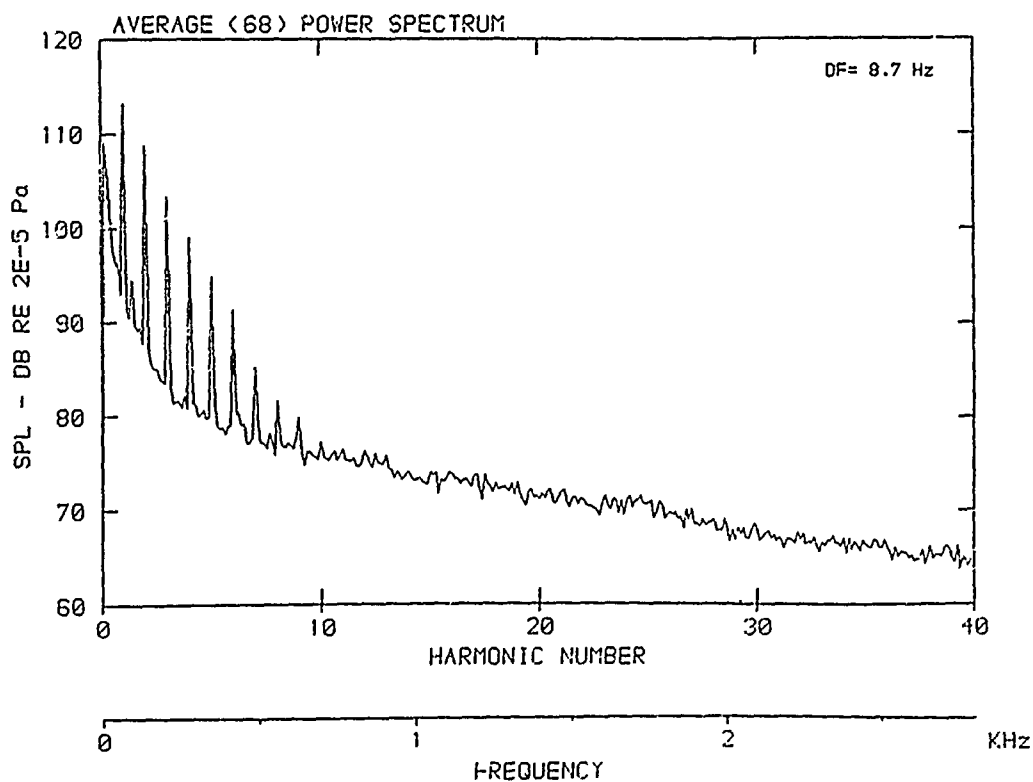
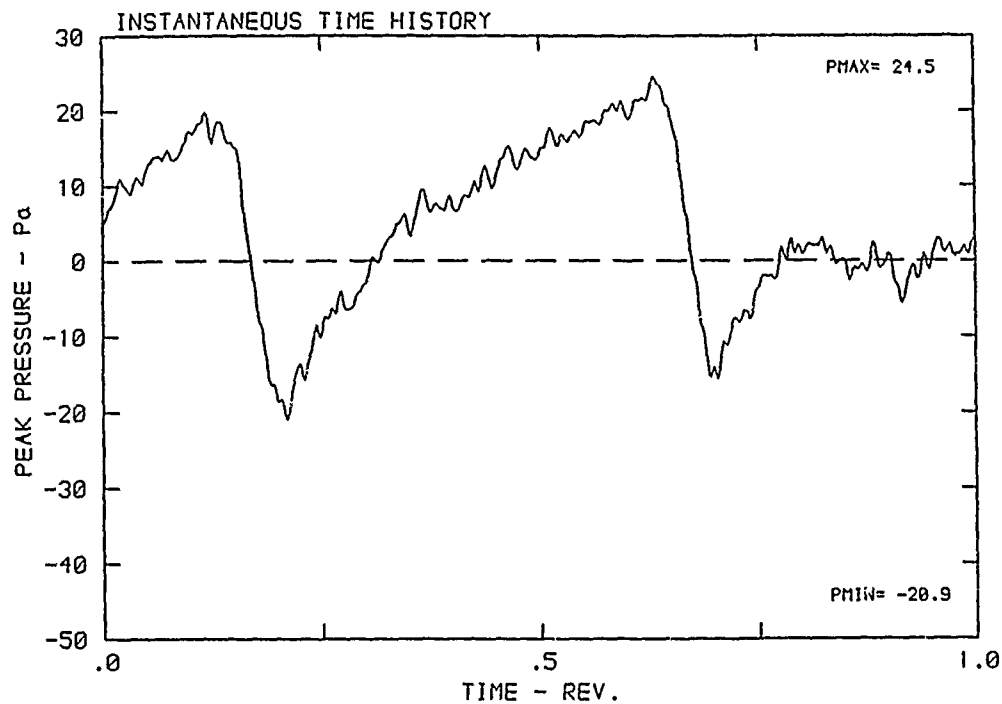
DATA POINT : DN-3      RUN : 91      MP : 2

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



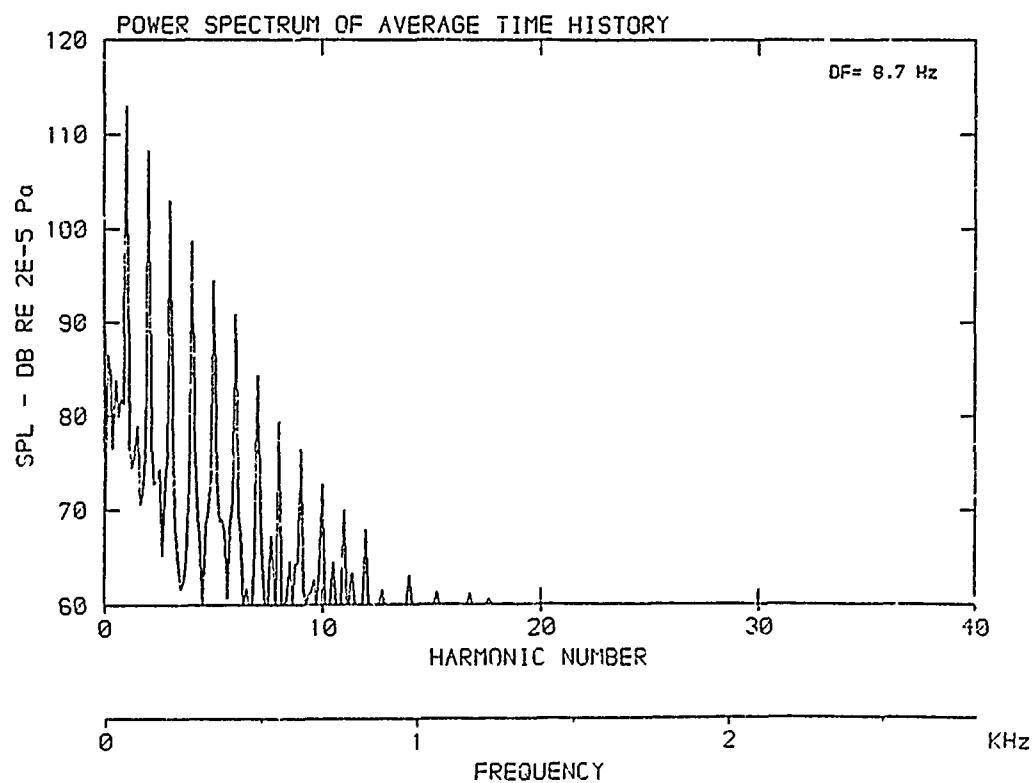
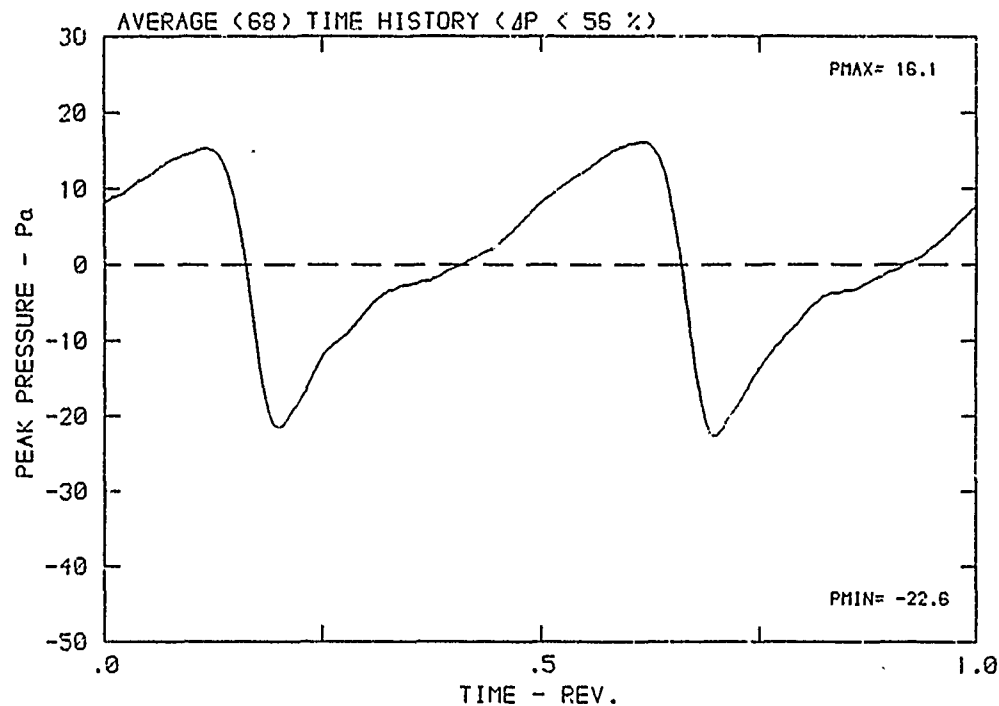
DATA POINT: DN-3    RUN: 91    MP: 3

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



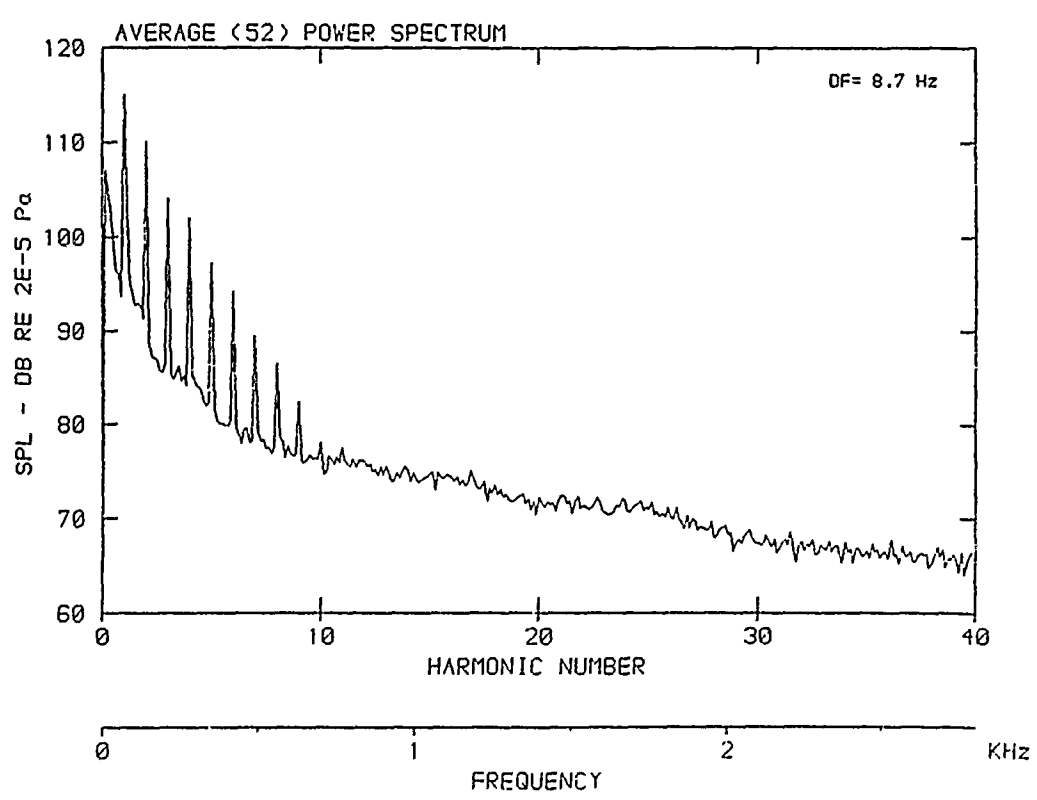
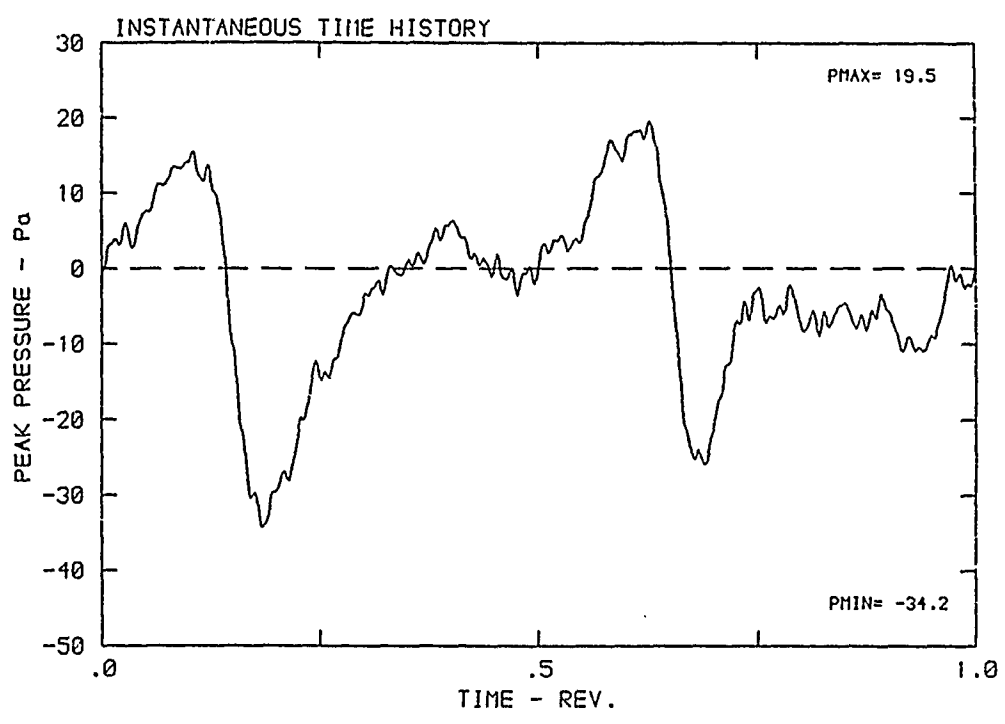
DATA POINT: DN-3 RUN: 91 MP: 3

$\beta$ : 29.0° MH: .6883 n: 2100 rpm  $v/u$ : .302  $\phi$ : .0° T: 286.0 K



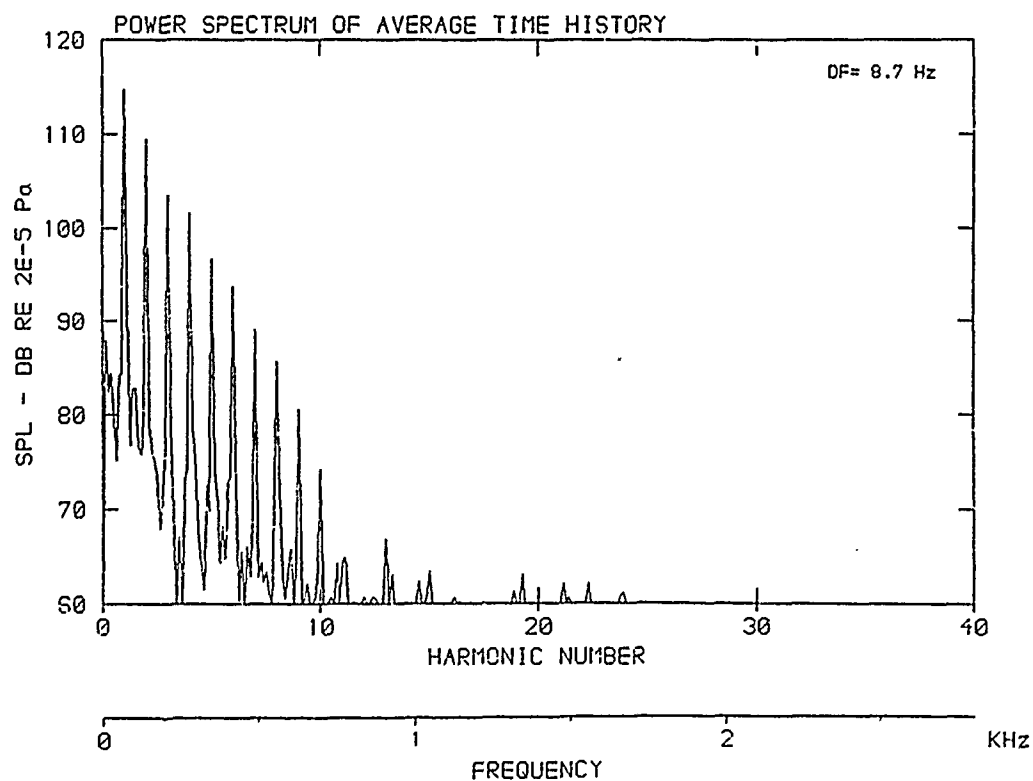
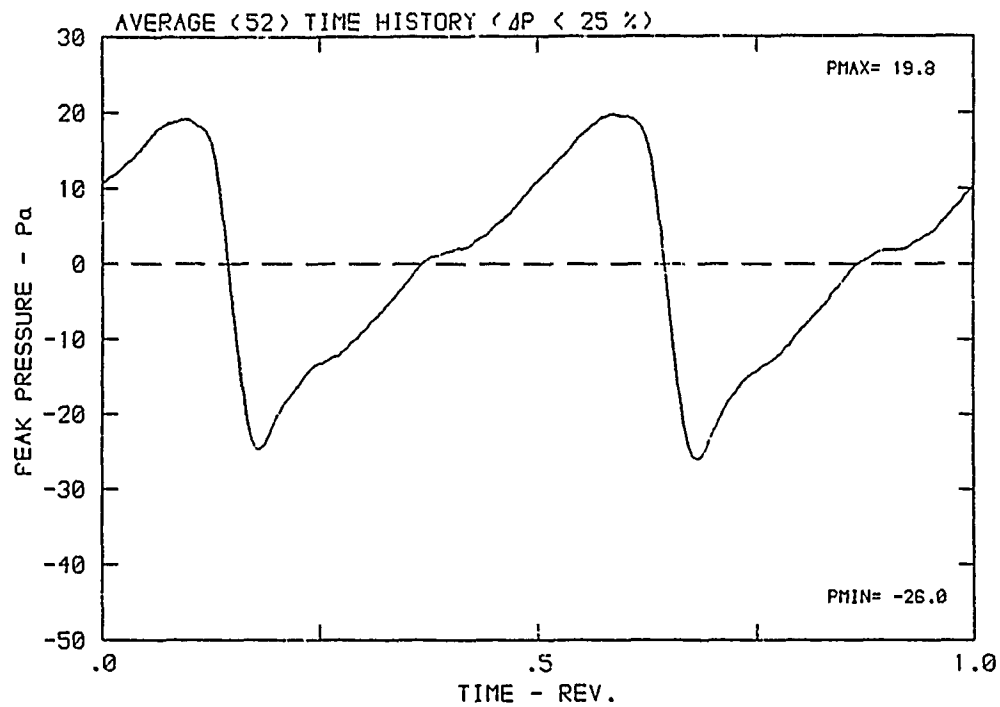
DATA POINT: DN-3      RUN: 91      MP: 4

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



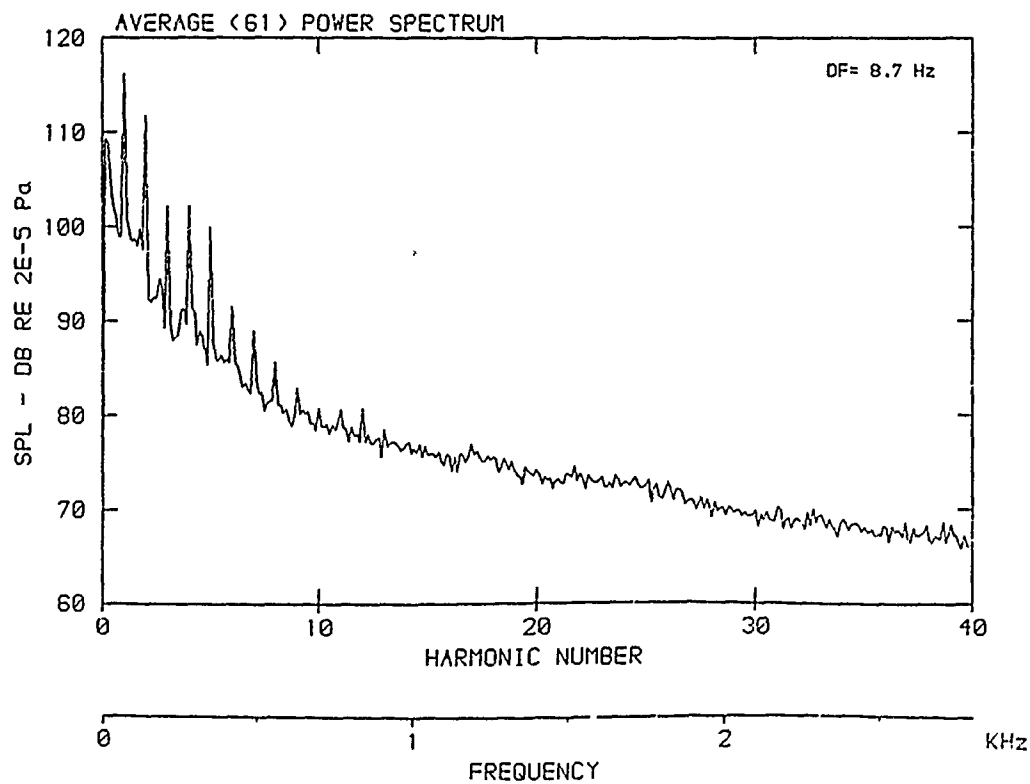
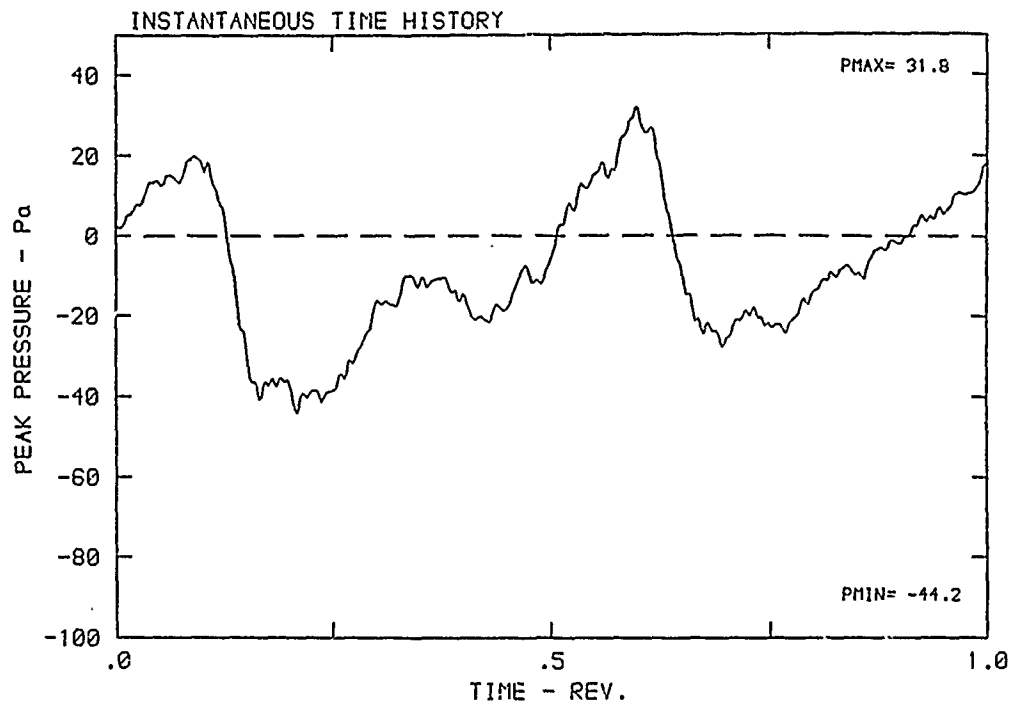
DATA POINT: DN-3      RUN: 91      MP: 4

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



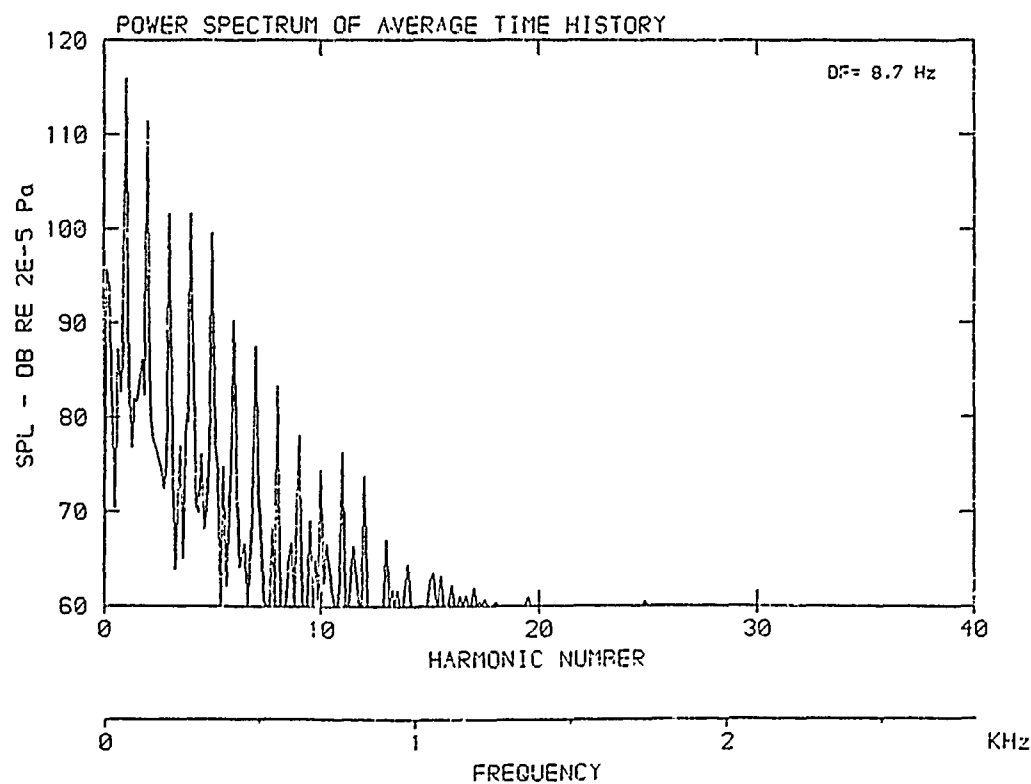
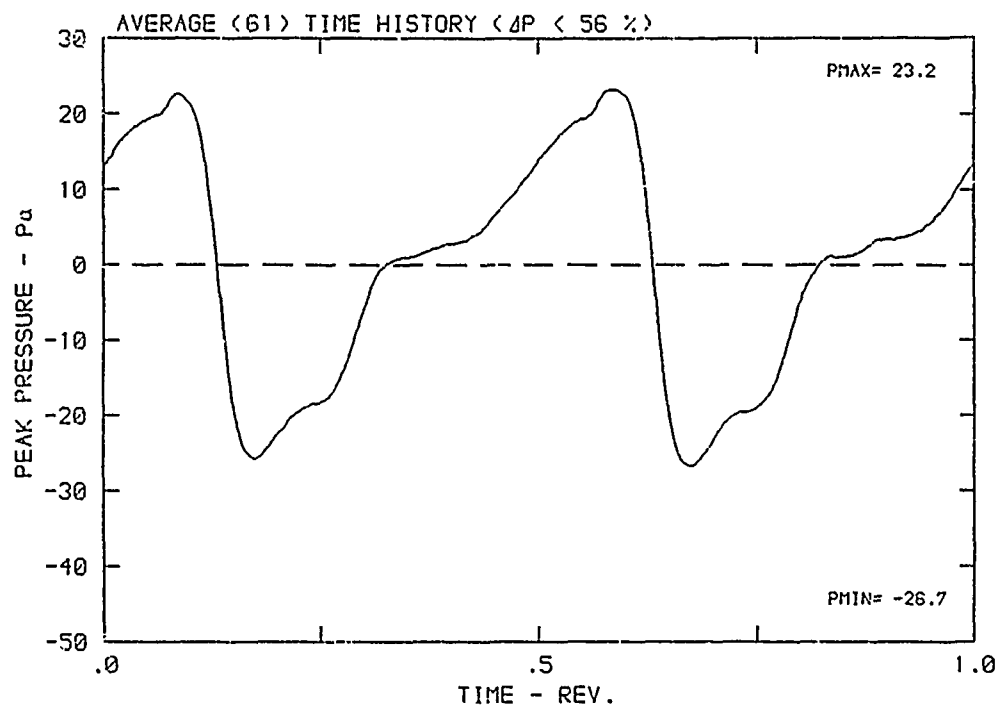
DATA POINT: DN-3      RUN: 91      MP: 5

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



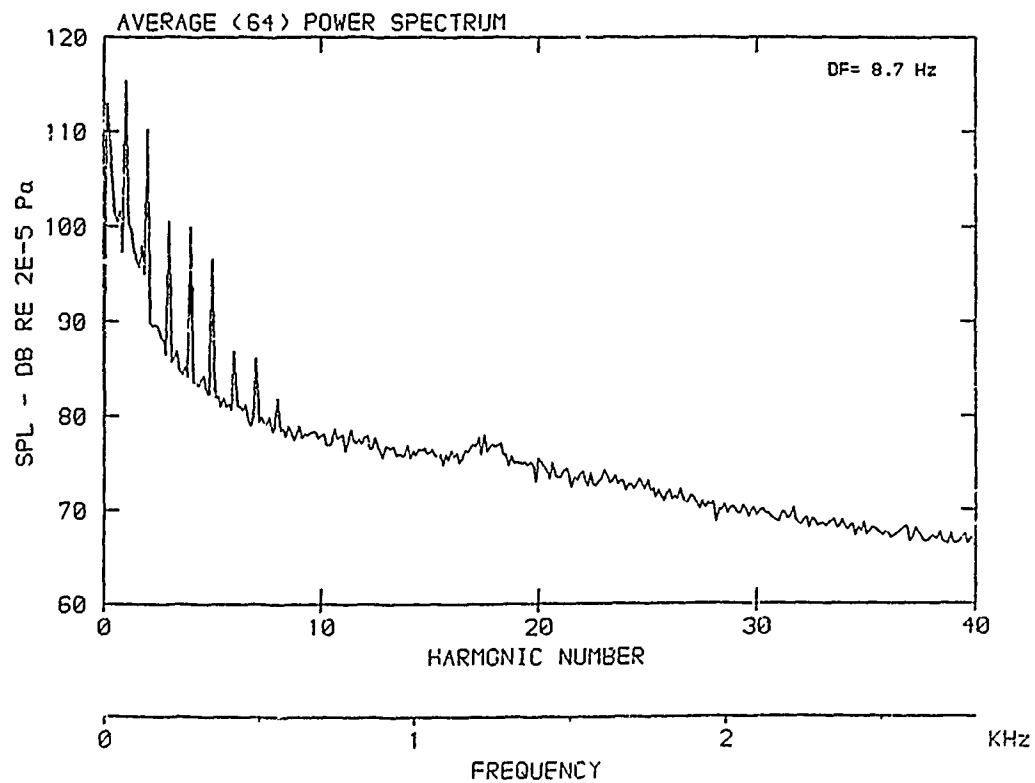
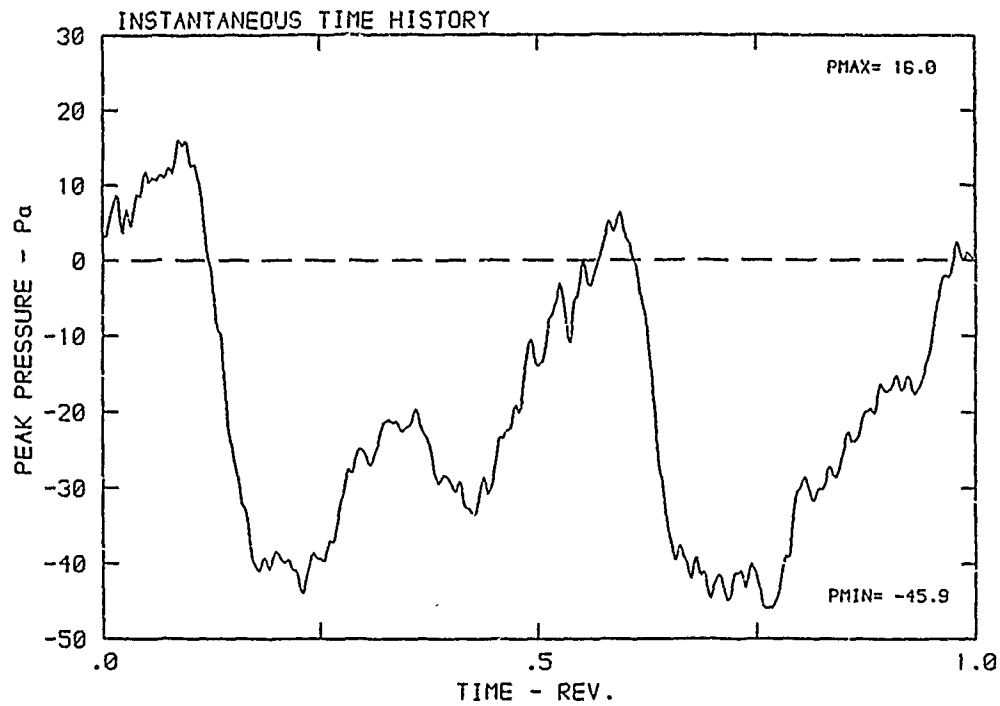
DATA POINT: DN-3 RUN: 91 MP: 5

$\beta$ : 29.0° MH: .6883 n: 2100 rpm v/u: .302  $\phi$ : .0° T: 286.0 K



DATA POINT: DN-3      RUN: 91      MP: 6

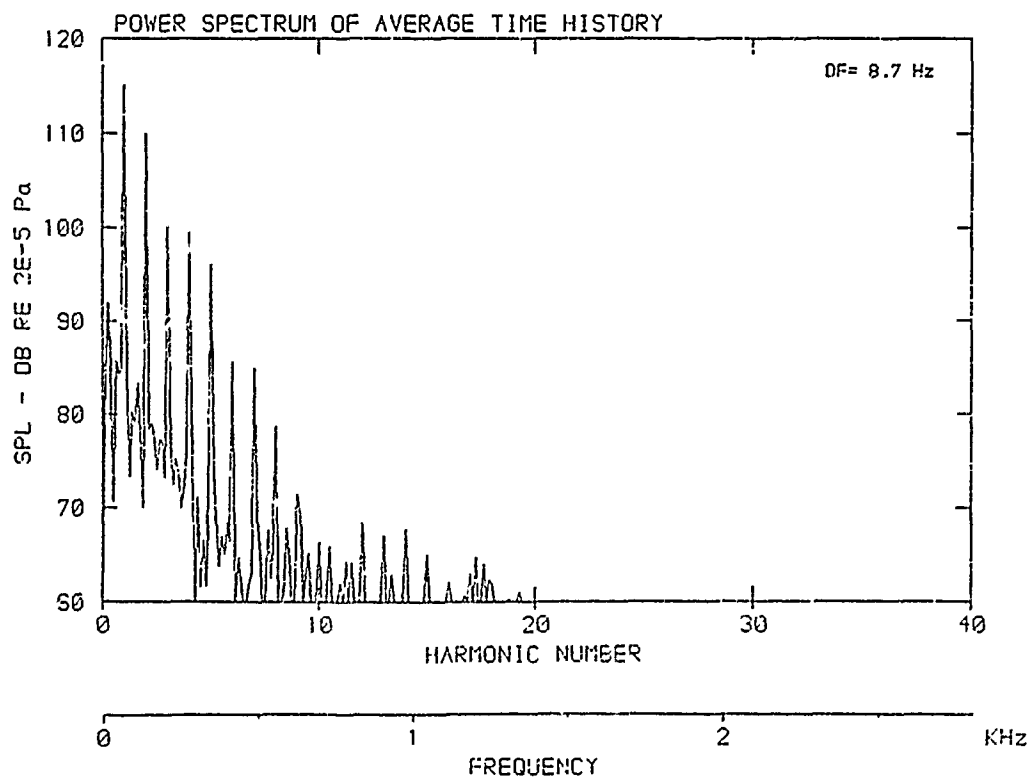
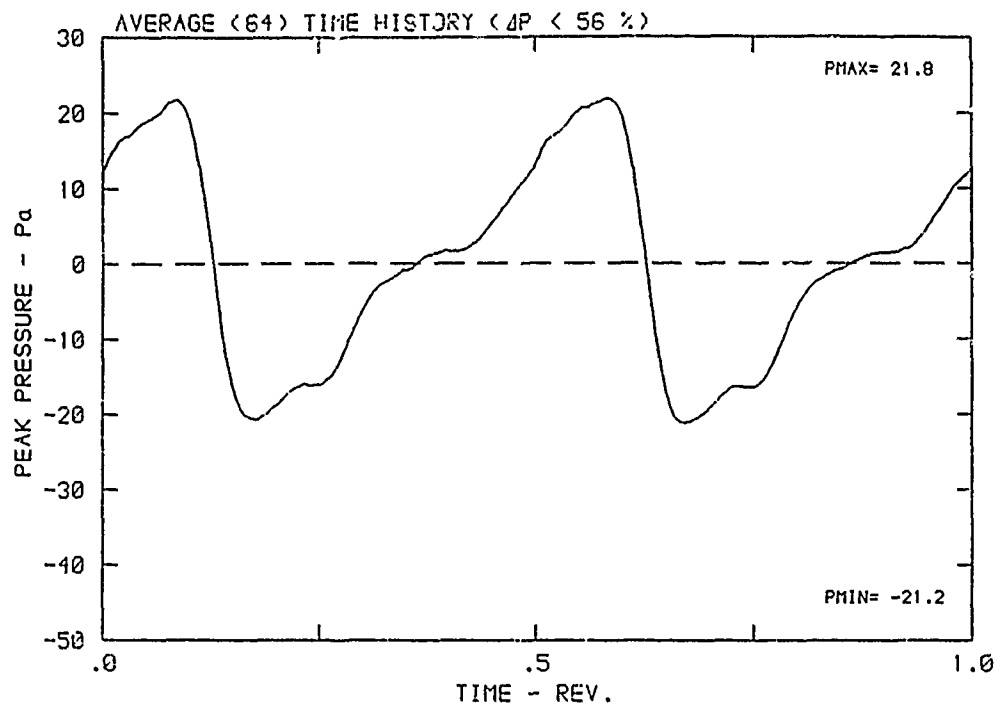
$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K





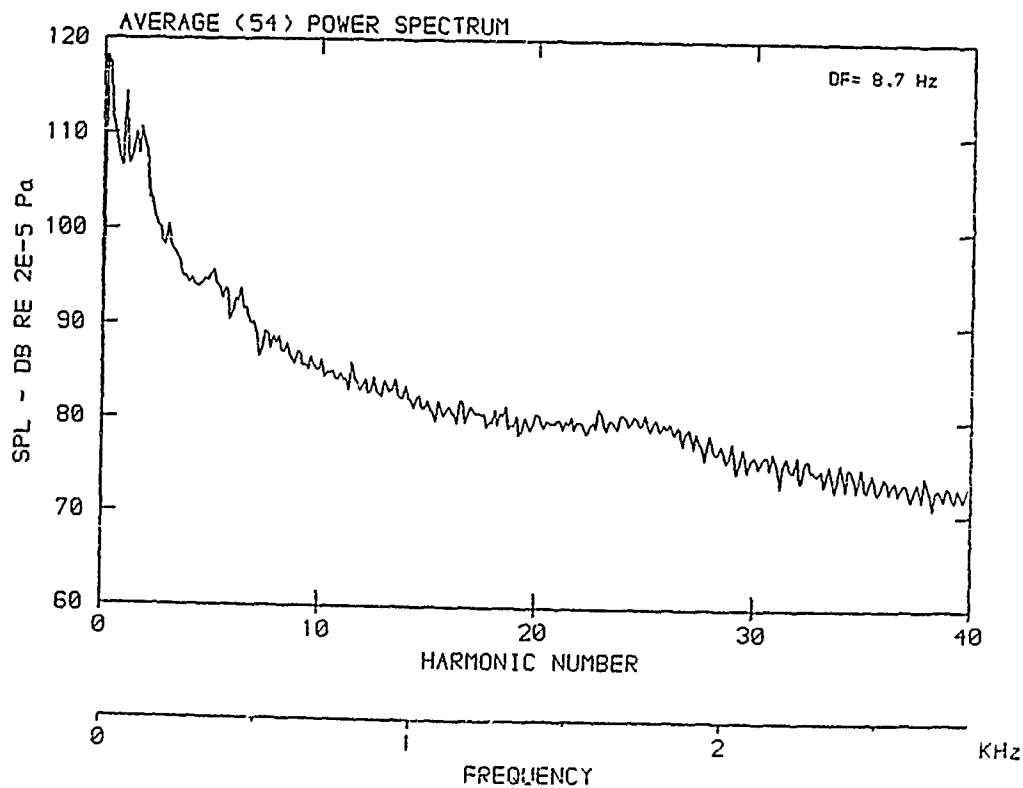
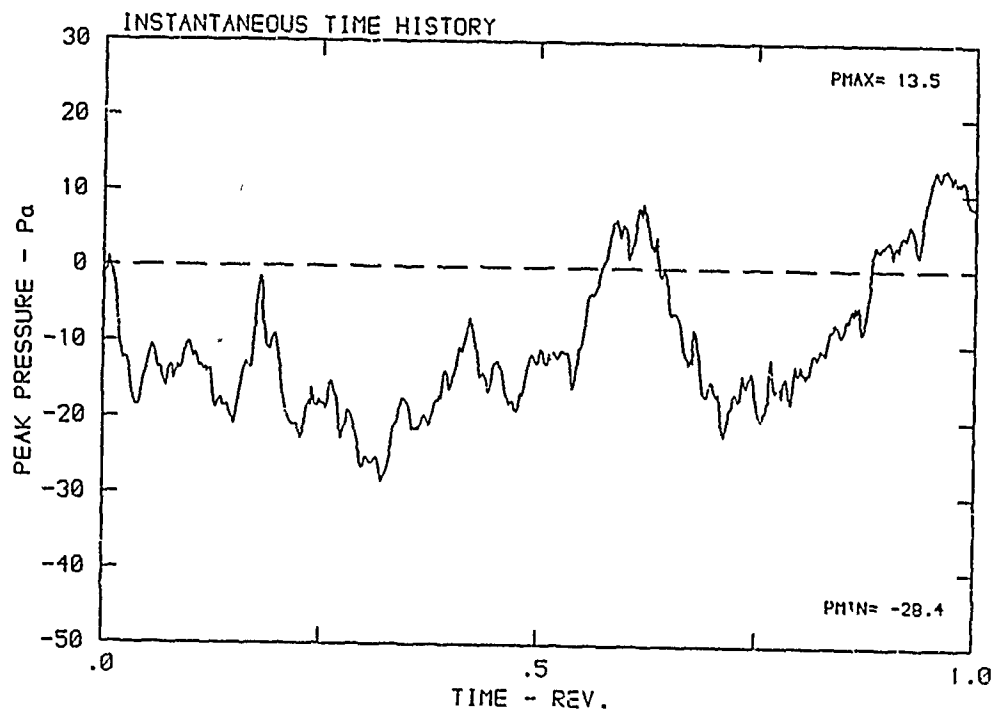
DATA POINT: DN-3 RUN: 91 MP: 6

$\beta$ : 29.0° MH: .6883 n: 2100 rpm v/u: .302  $\phi$ : .0° T: 286.0 K



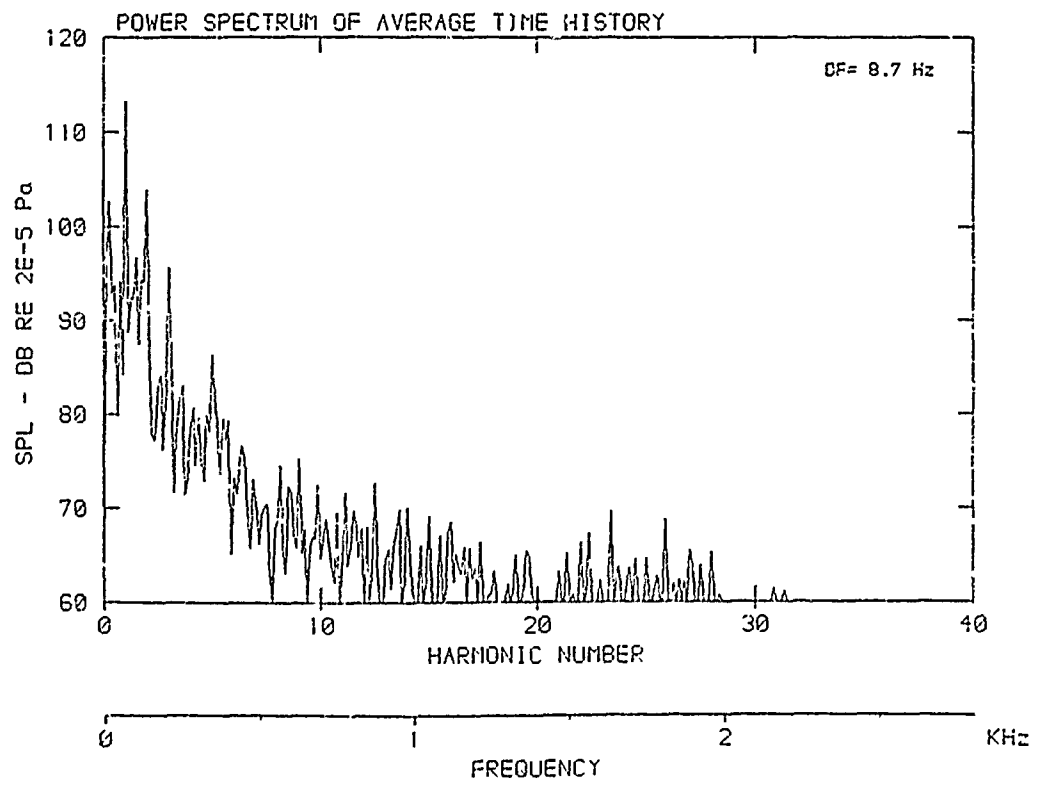
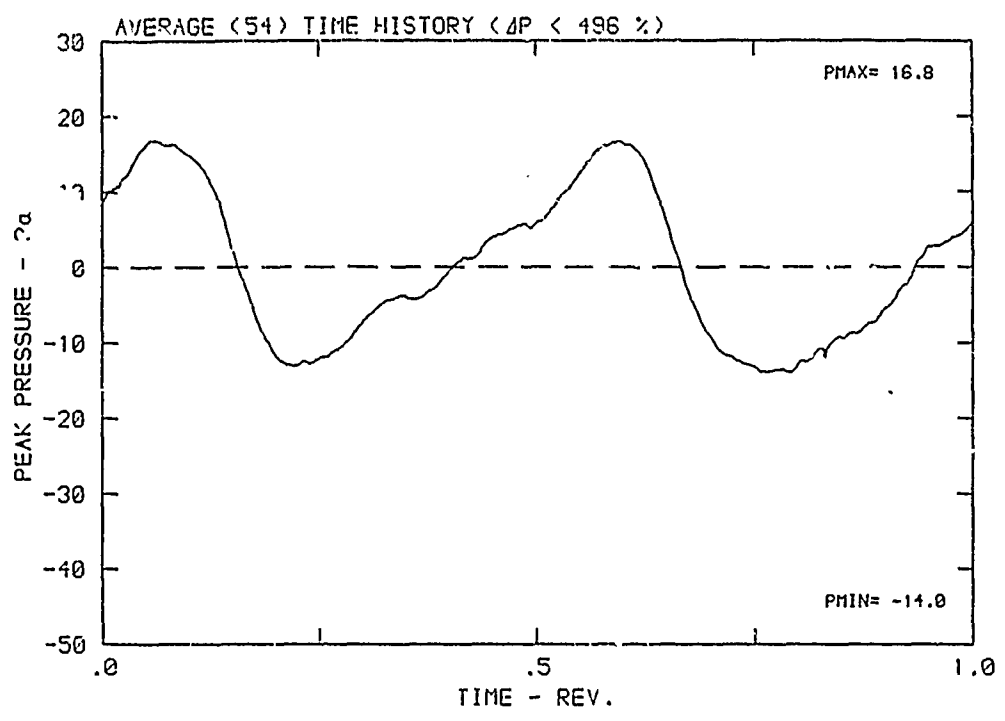
DATA POINT: DN-3 RUN: 91 MP: 7

$\beta$ : 29.0° MH: .6883 n: 2100 rpm  $v/u$ : .302  $\phi$ : .0° T: 286.0 K



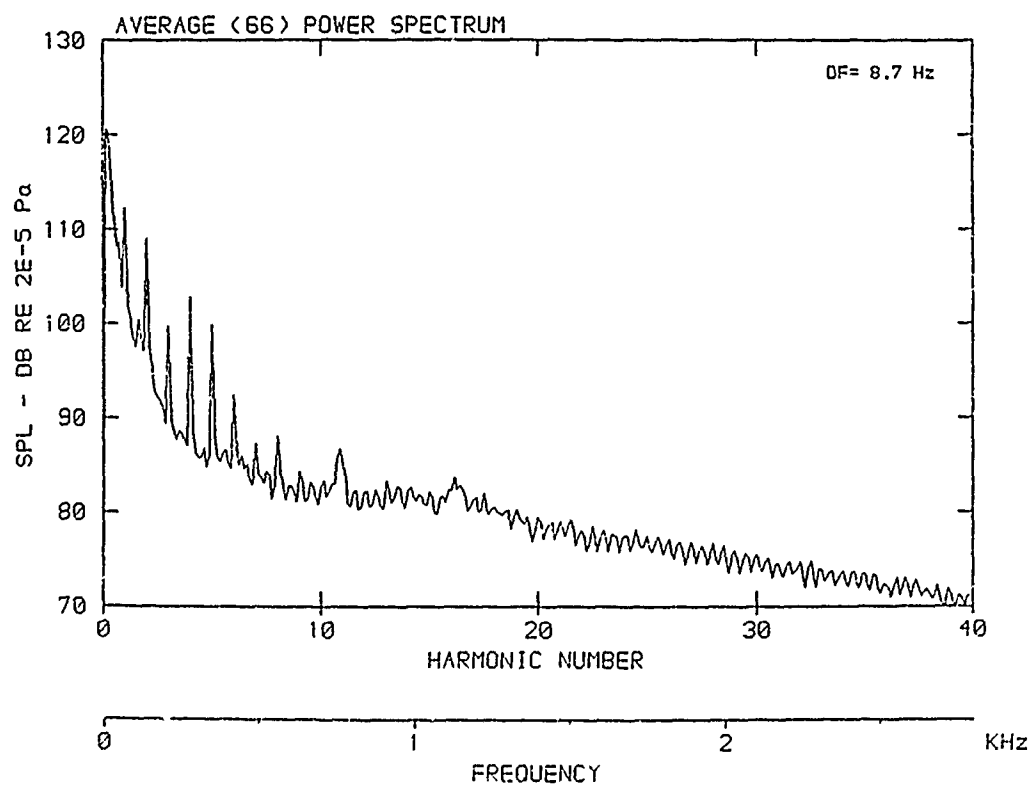
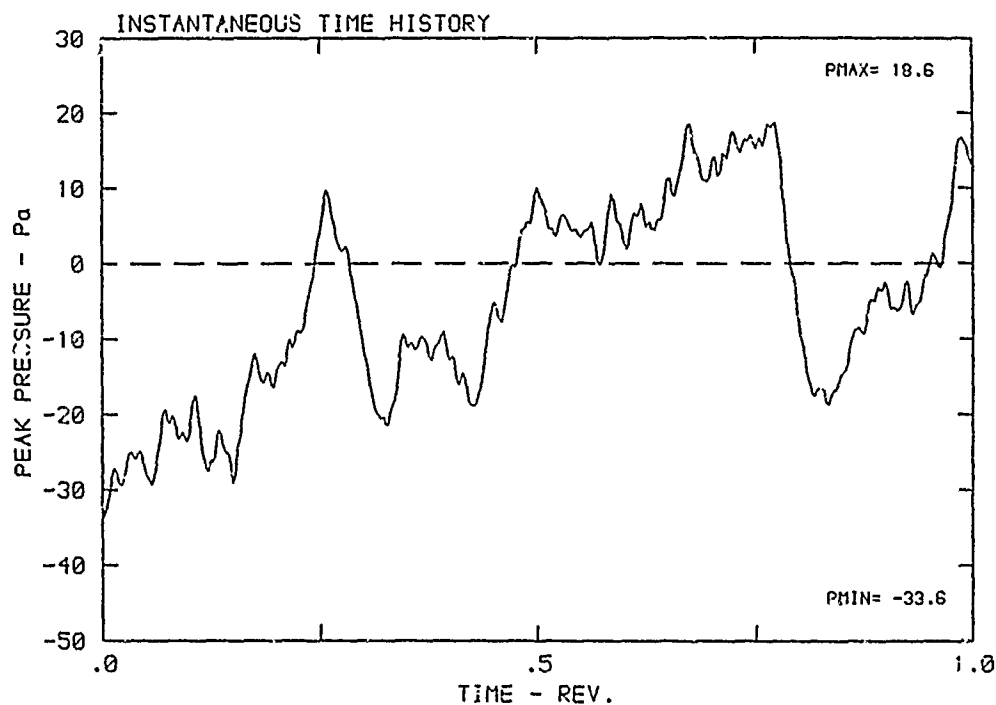
DATA POINT: DN-3      RUN: .91      MP: 7

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



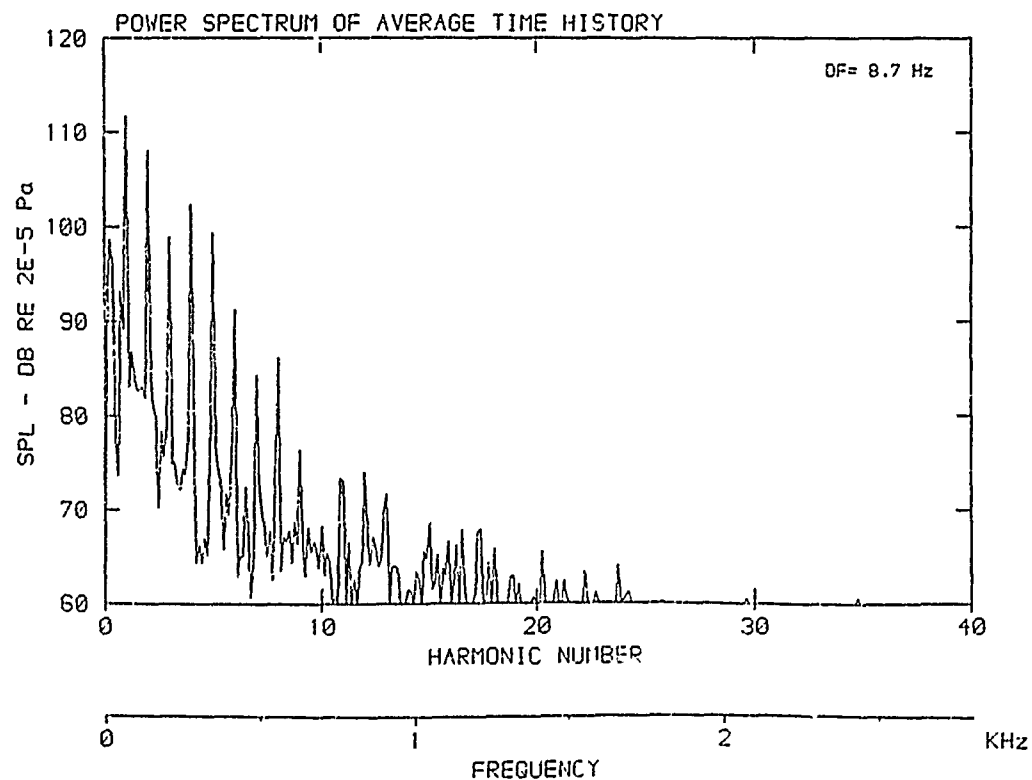
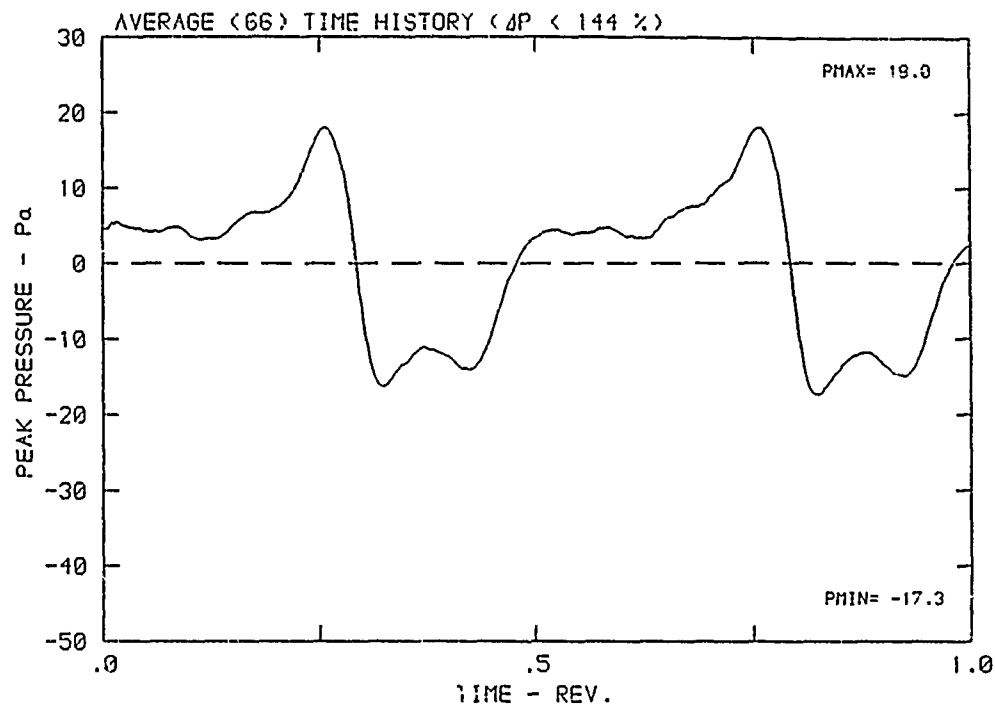
DATA POINT: DN-3      RUN: 91      MP: 3

$\beta$ : 29.0°    MH: .6893    n: 2100 rpm     $v/u$ : .302     $\phi$ : .0°    T: 296.0 K



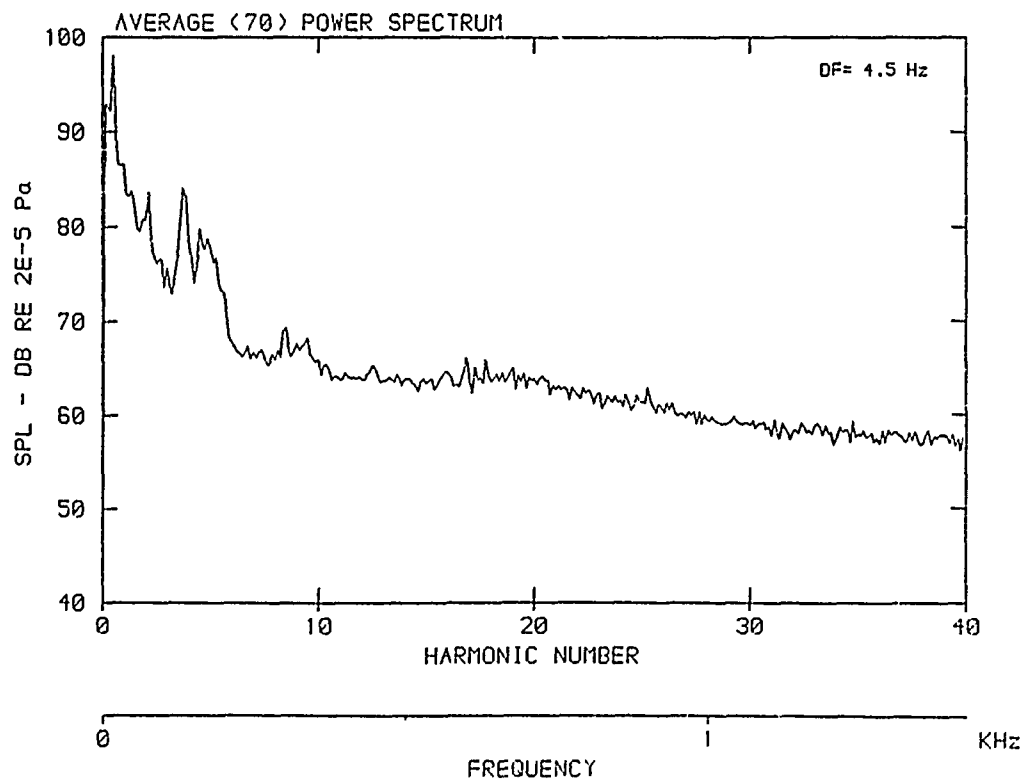
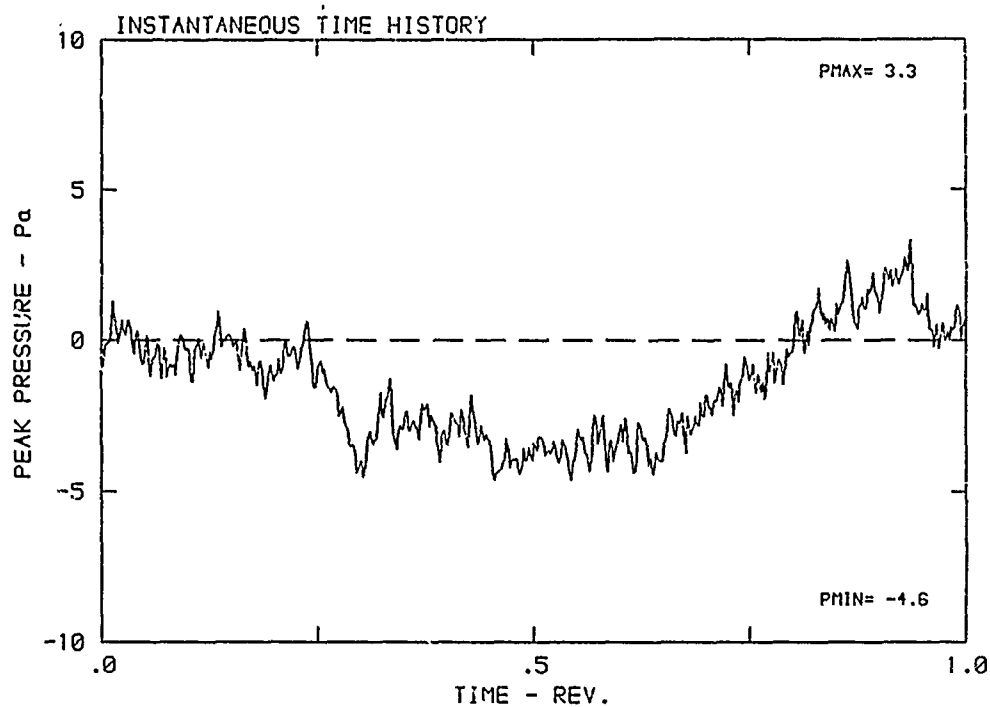
DATA POINT: DN-3    RUN: 91    MP: 9

$\beta$ : 29.0°    MH: .6883    n: 2100 rpm    v/u: .302     $\phi$ : .0°    T: 286.0 K



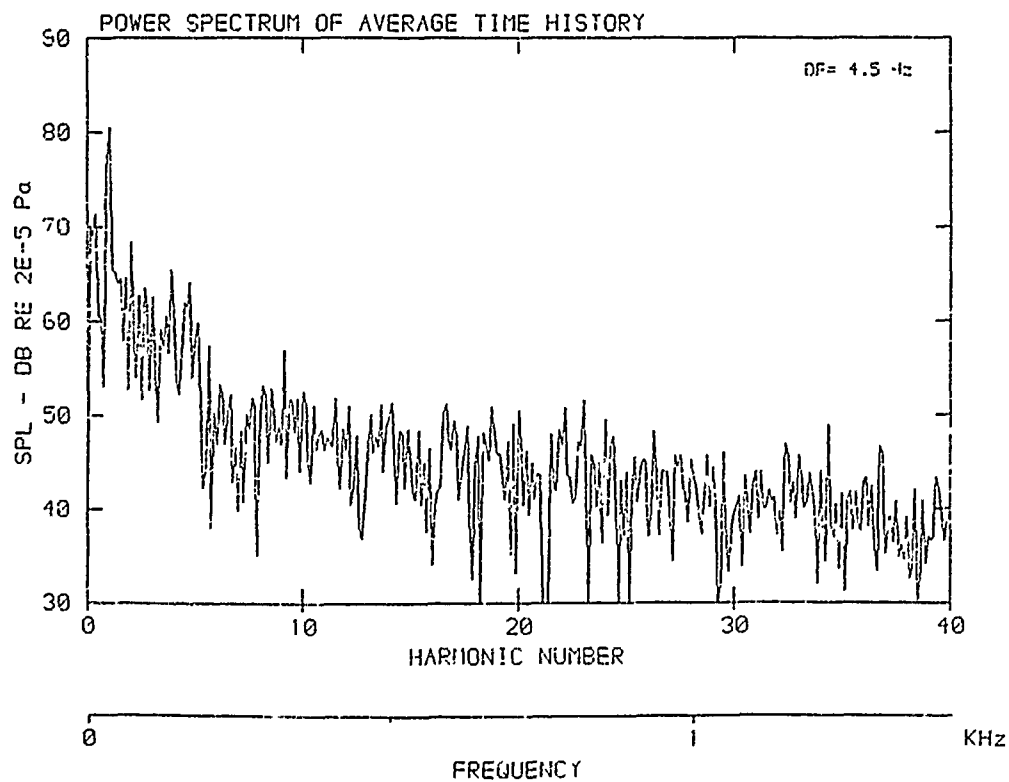
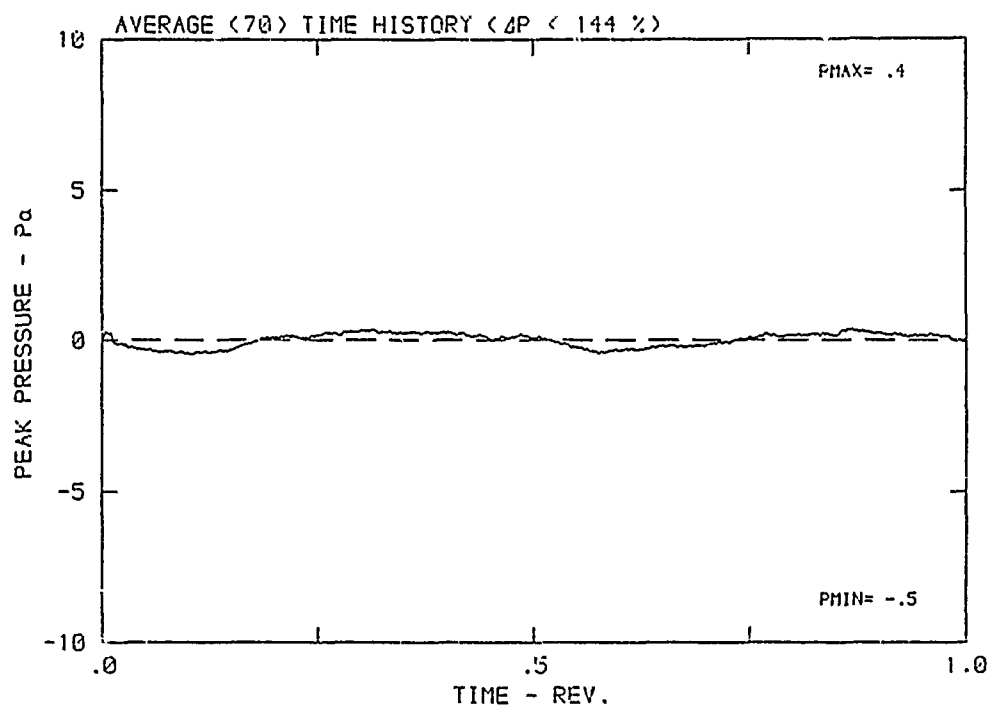
DATA POINT: DN-4    RUN: 96    MP: 1

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .45i     $\phi$ : .0°    T: 286.8 K



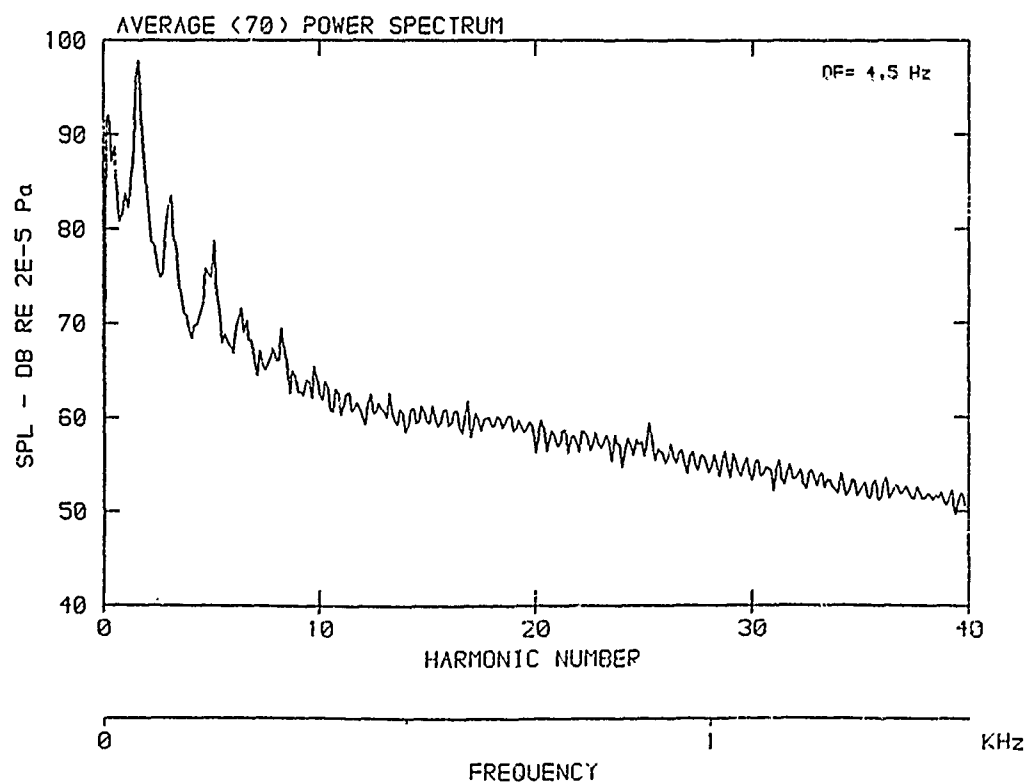
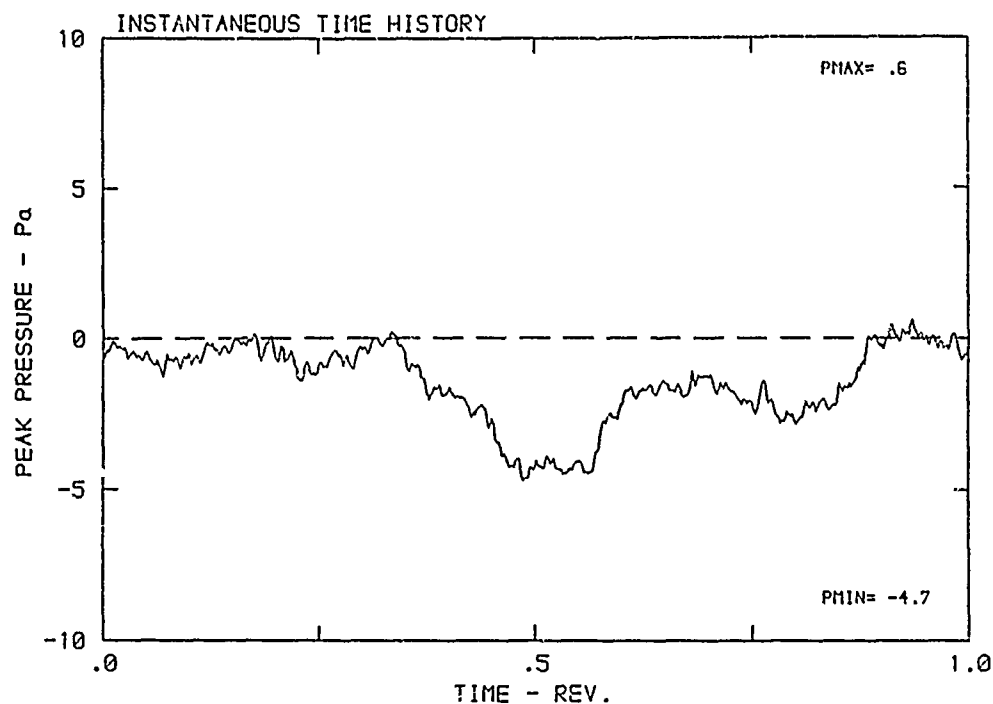
DATA POINT: DN-4      RUN: 96      MP: 1

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



DATA POINT: DN-4    RUN: 96    MP: 2

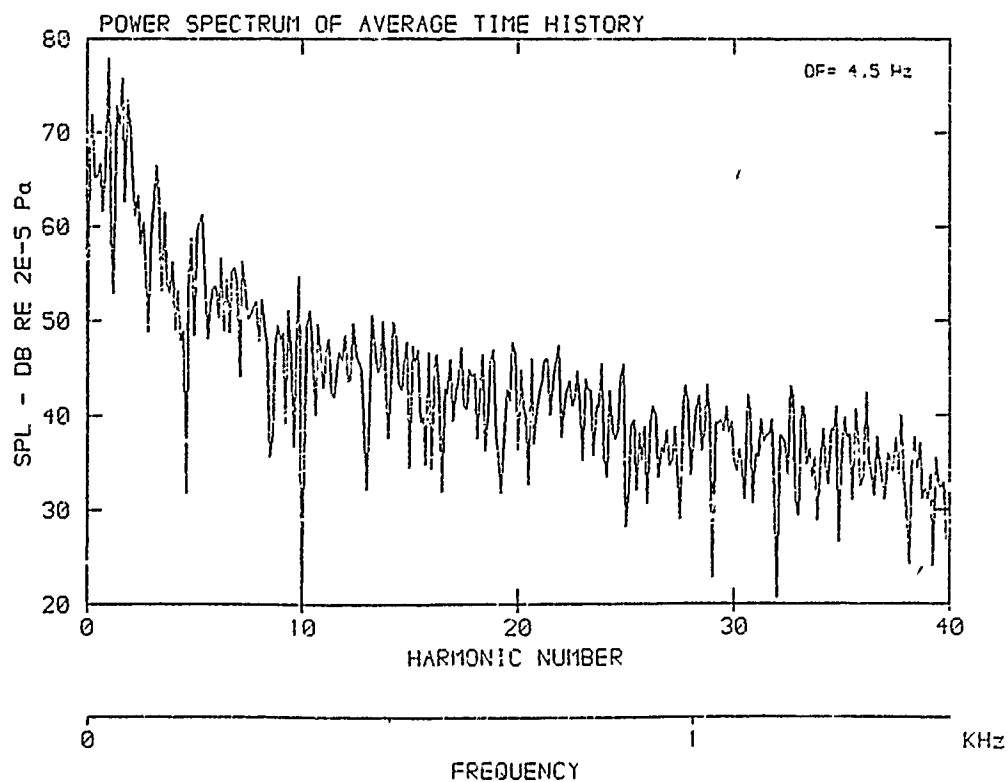
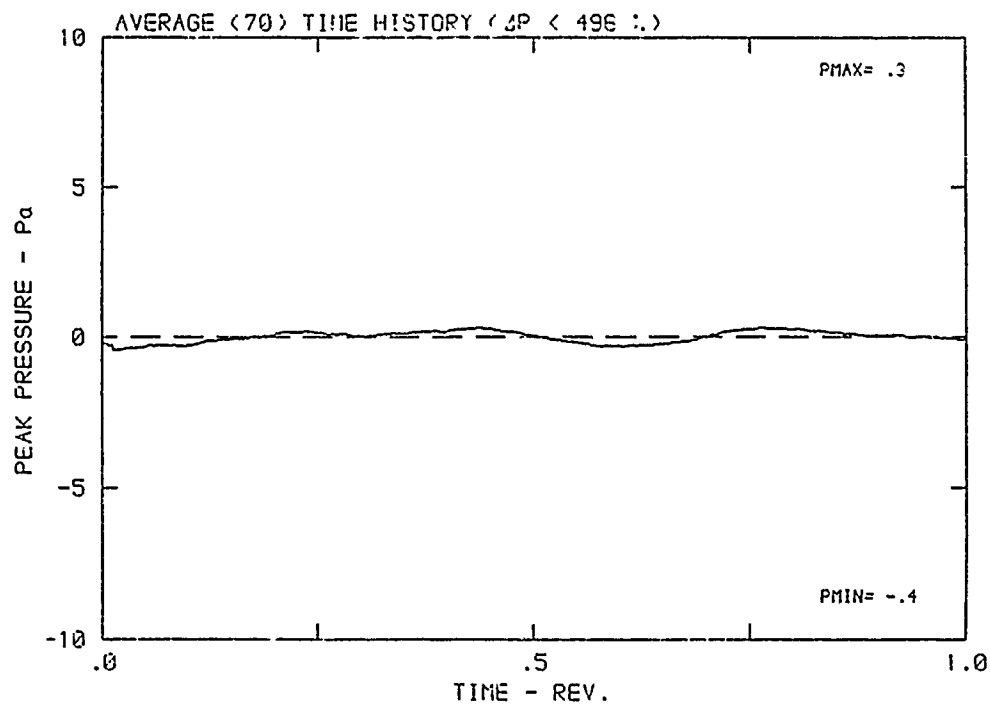
$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 295.8 K





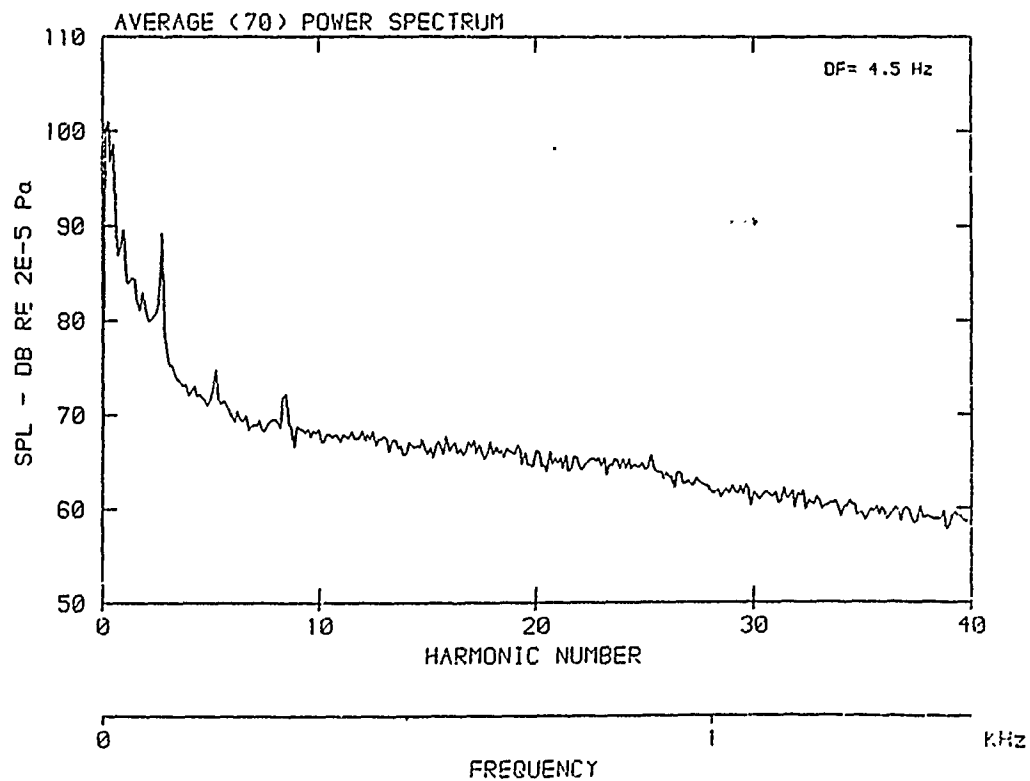
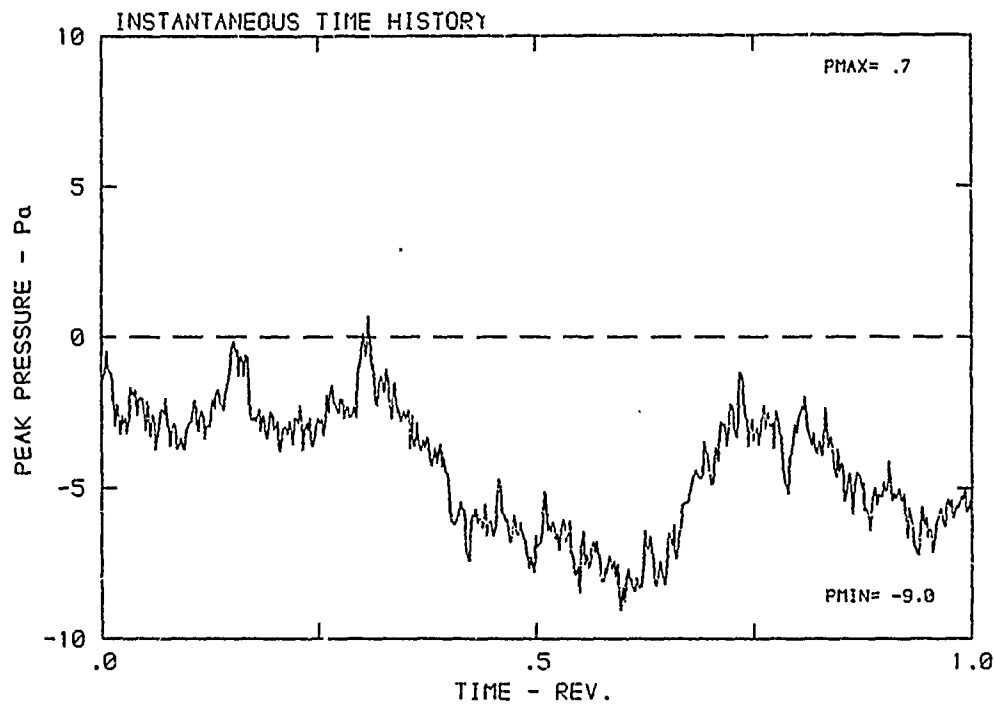
DATA POINT: DN-4      RUN: 96      MP: 2

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



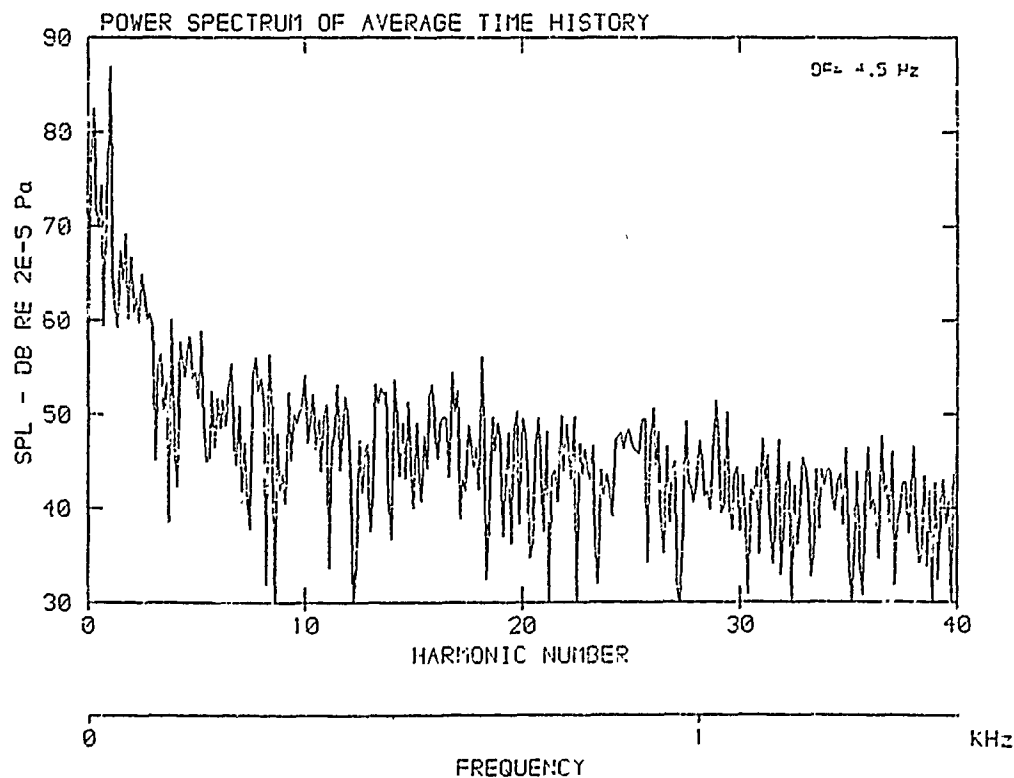
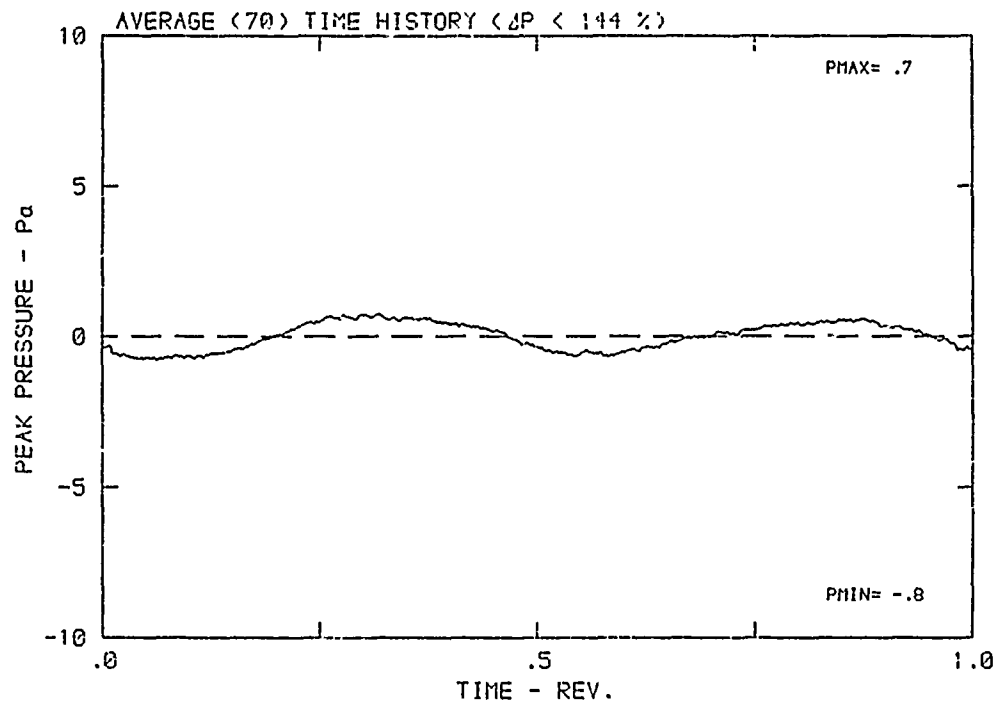
DATA POINT: DN-4    RUN: 96    MP: 3

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm     $v/u$ : .451     $\phi$ : .0°    T: 286.8 K



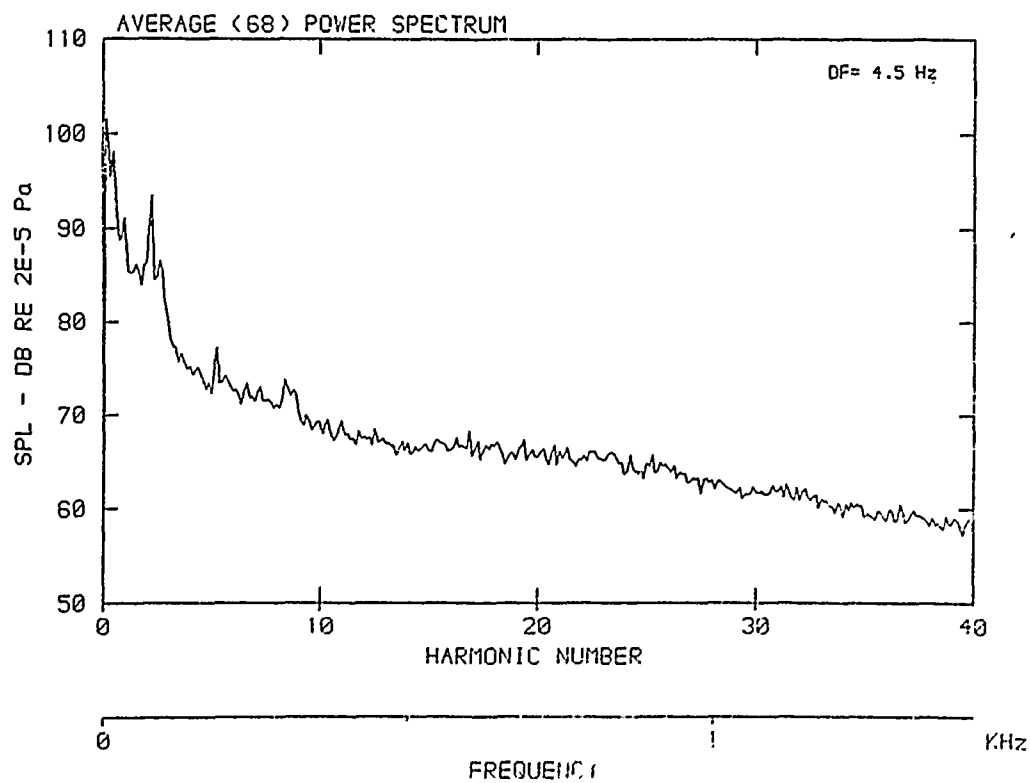
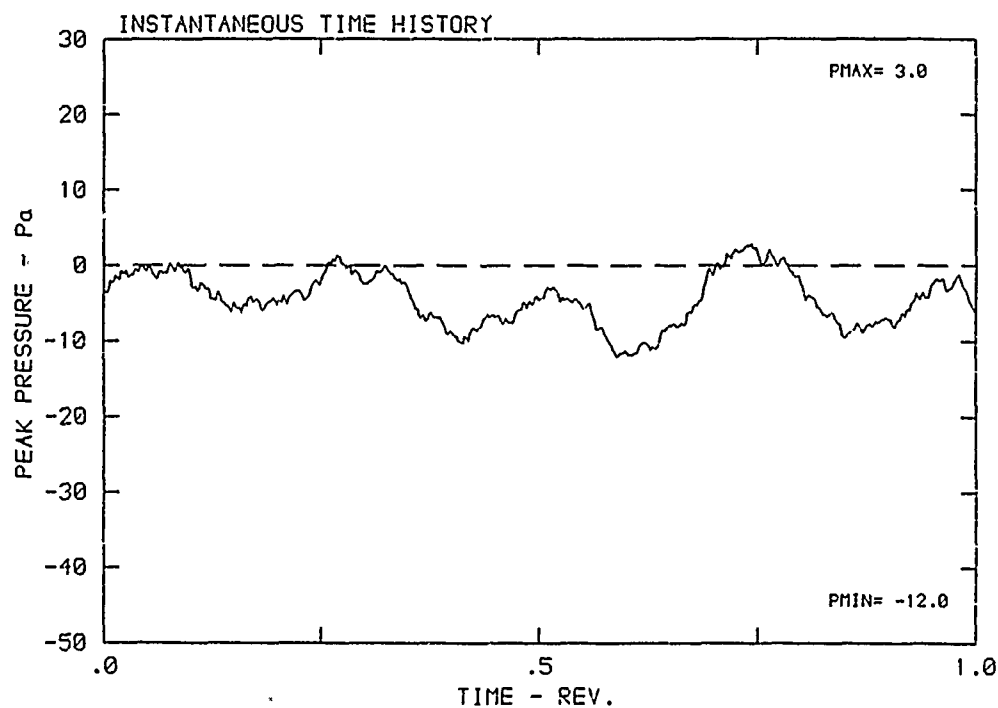
DATA POINT: DN-4 RUN: 96 MP: 3

$\beta$ : 29.0° MH: .3675 n: 1069 rpm  $v/u$ : .451  $\phi$ : .0° T: 286.8 K



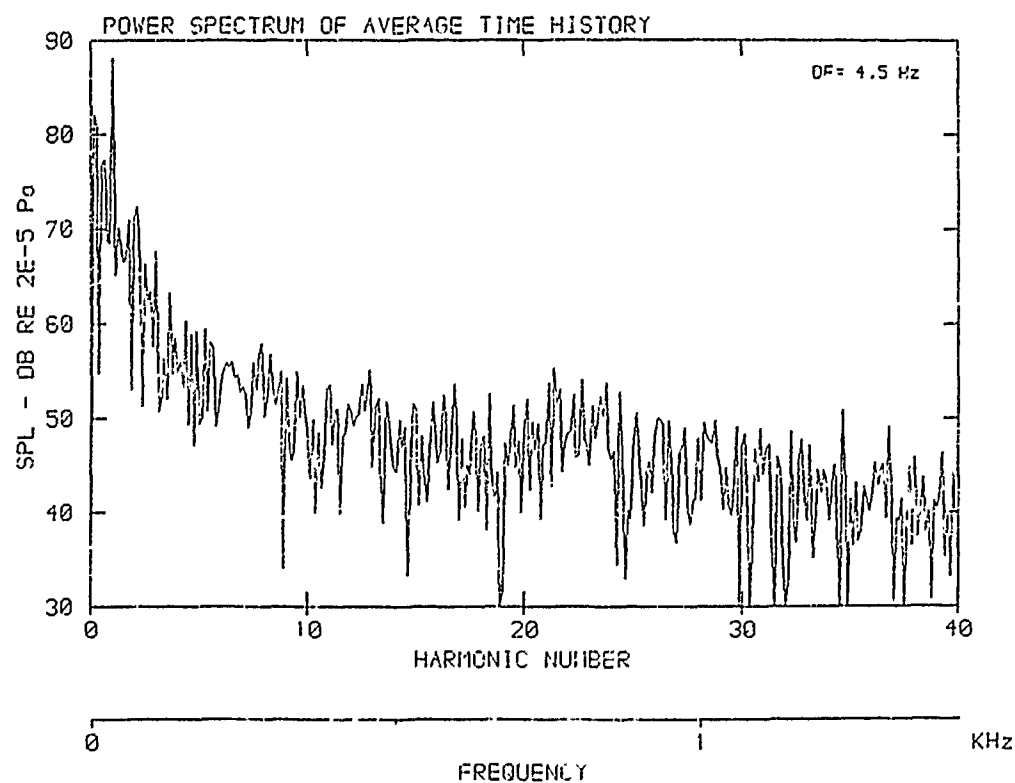
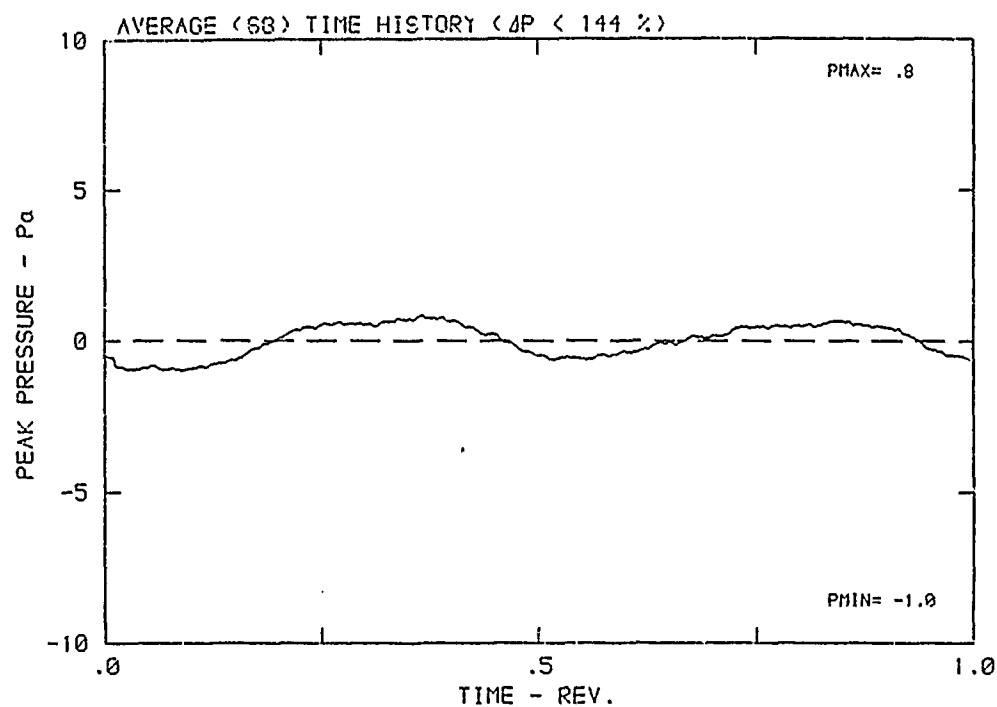
DATA POINT: DN-4    RUN: 96    MP: 4

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



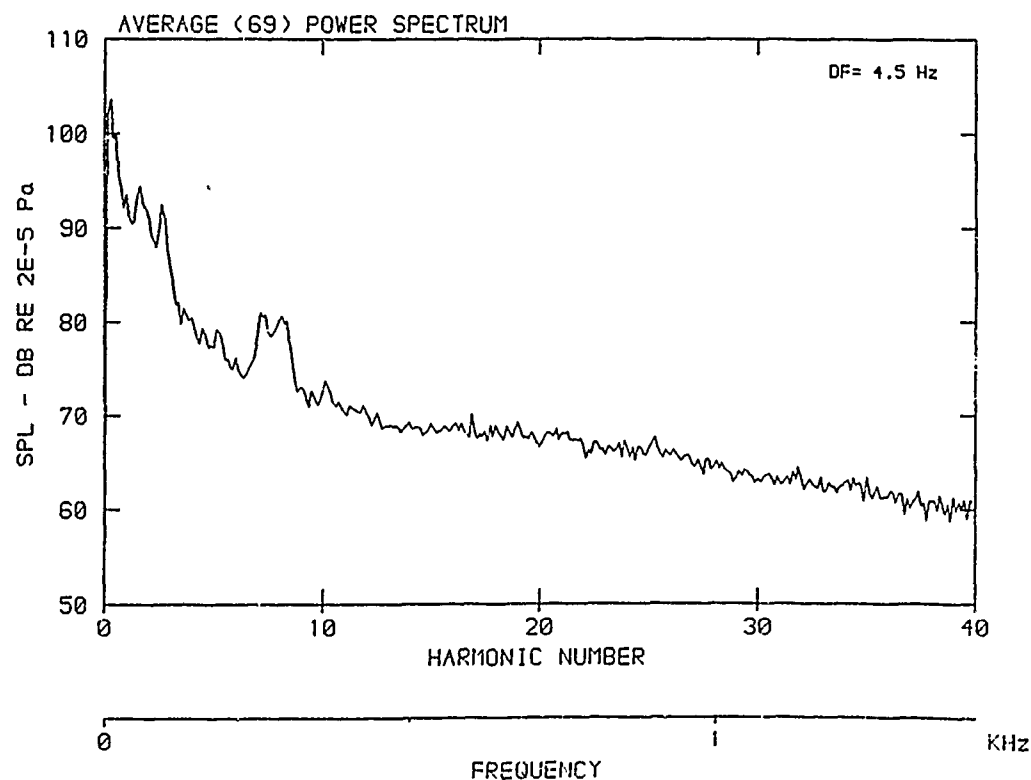
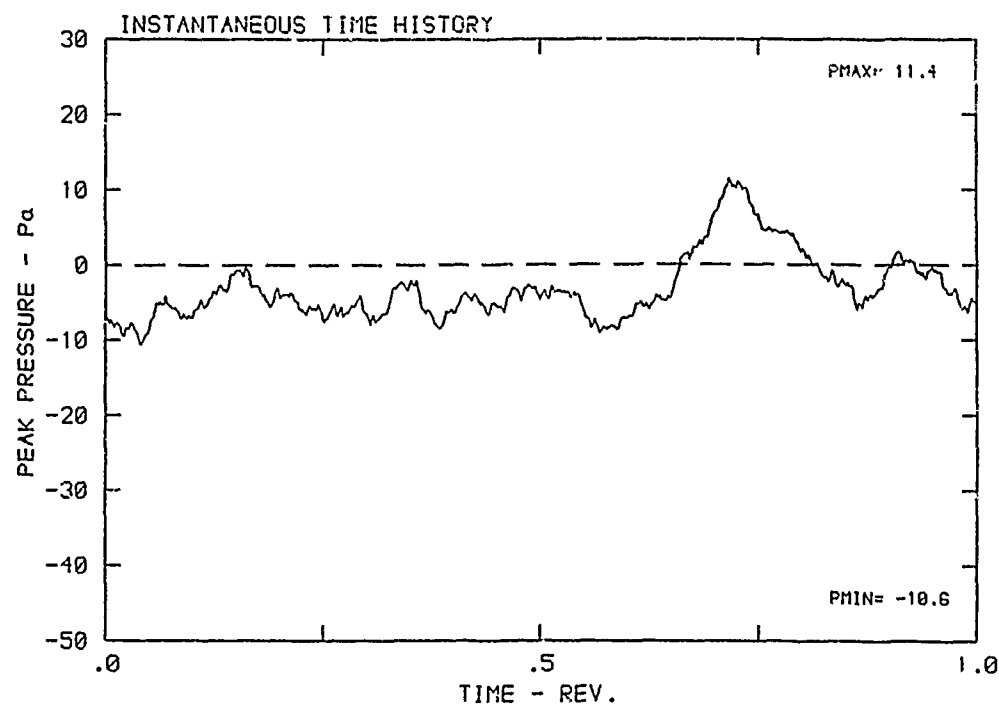
DATA POINT: DN-4      RUN: 96      MP: 4

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



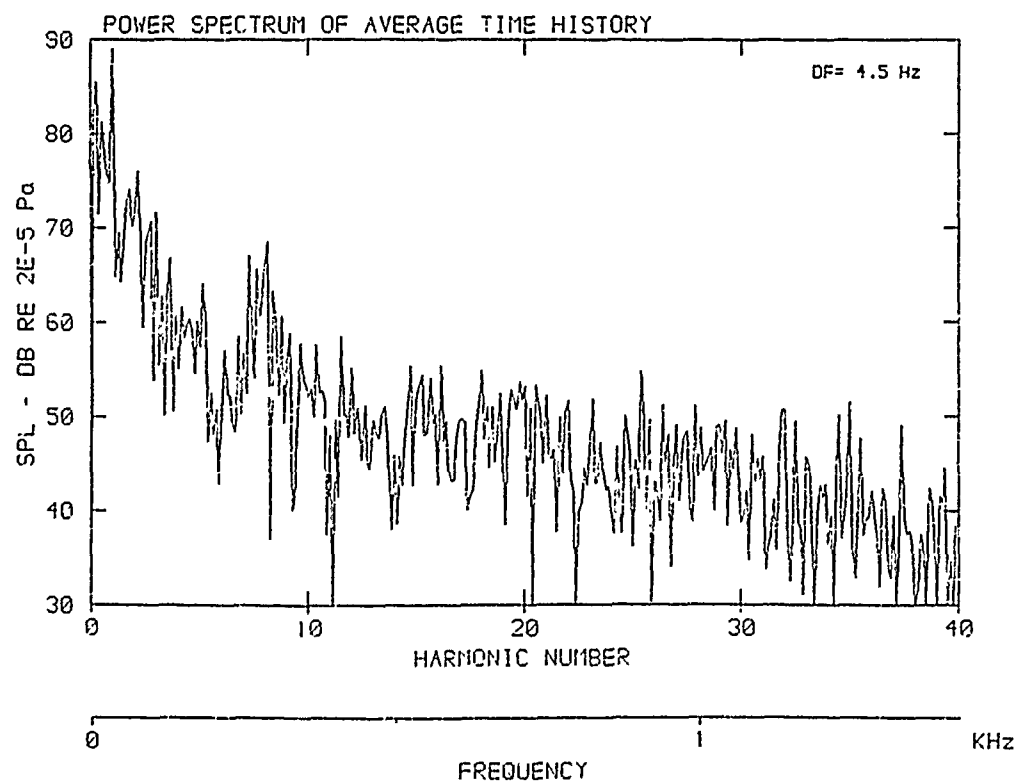
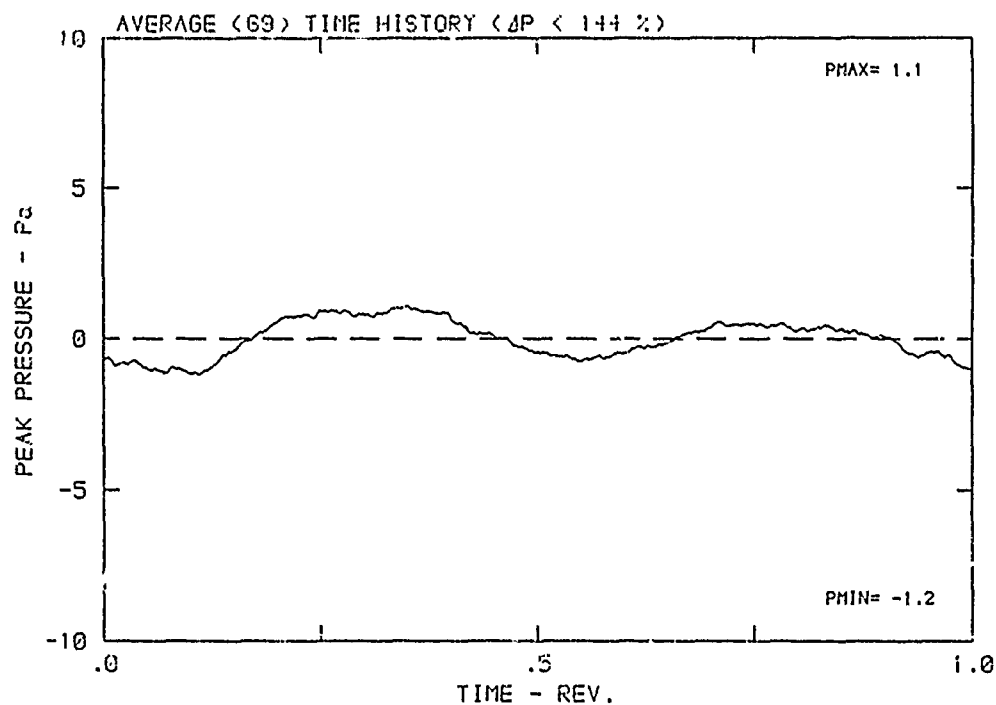
DATA POINT: DN-4    RUN: 96    MP: 5

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 266.8 K



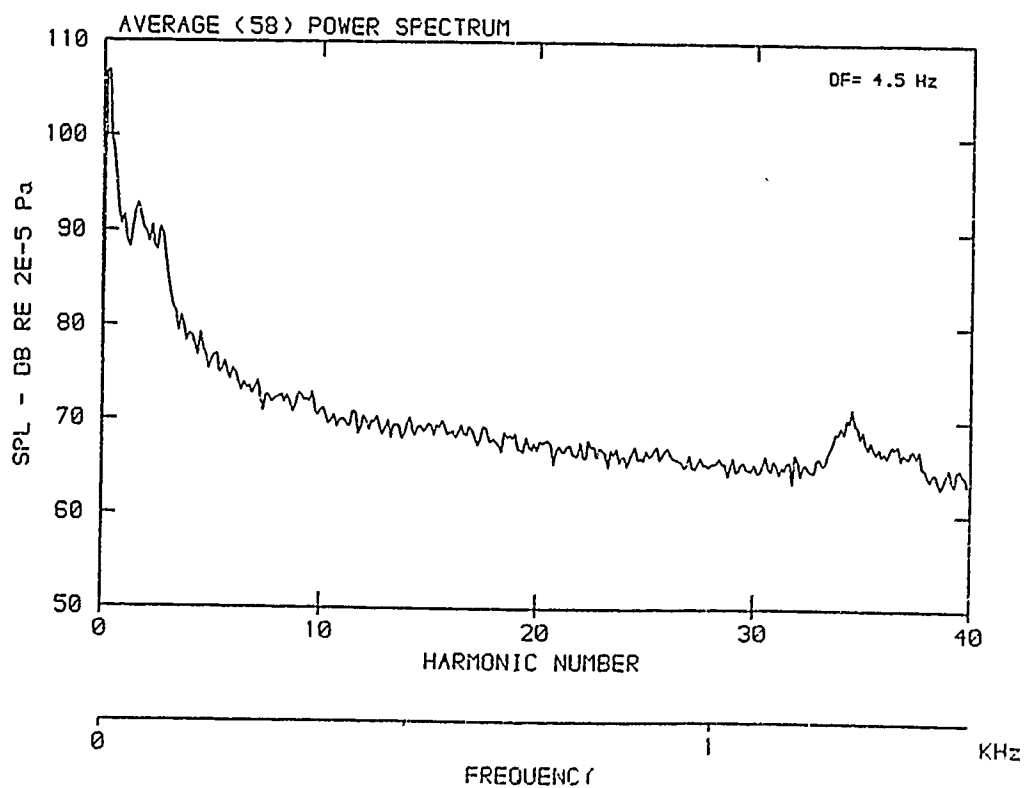
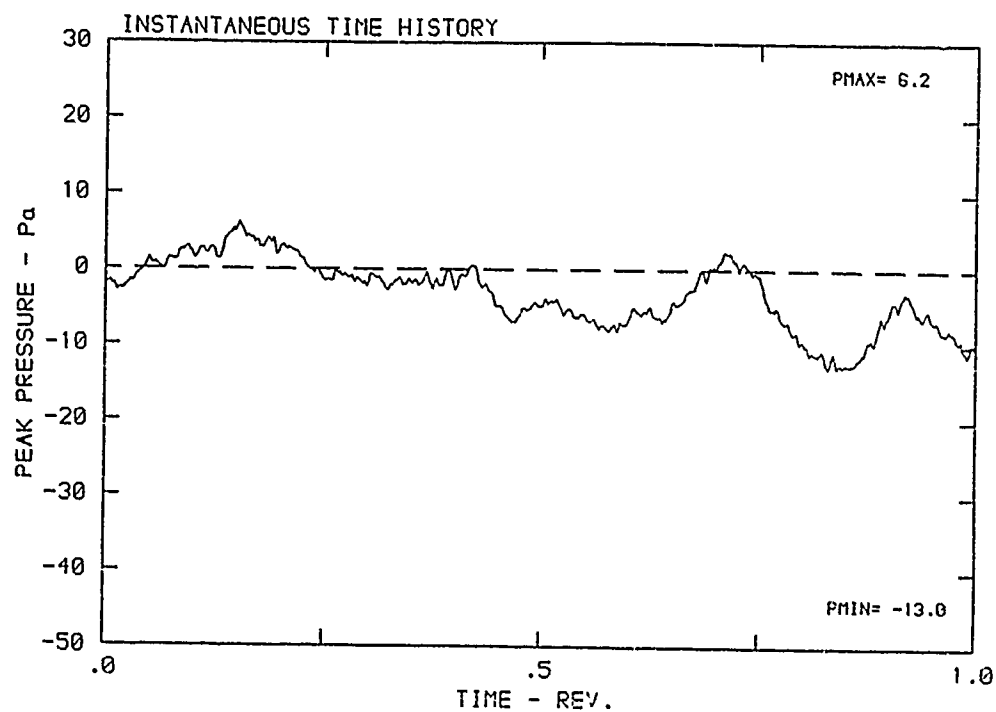
DATA POINT: DN-4    RUN: 96    MP: 5

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



DATA POINT: DN-4    RUN: 96    MP: 6

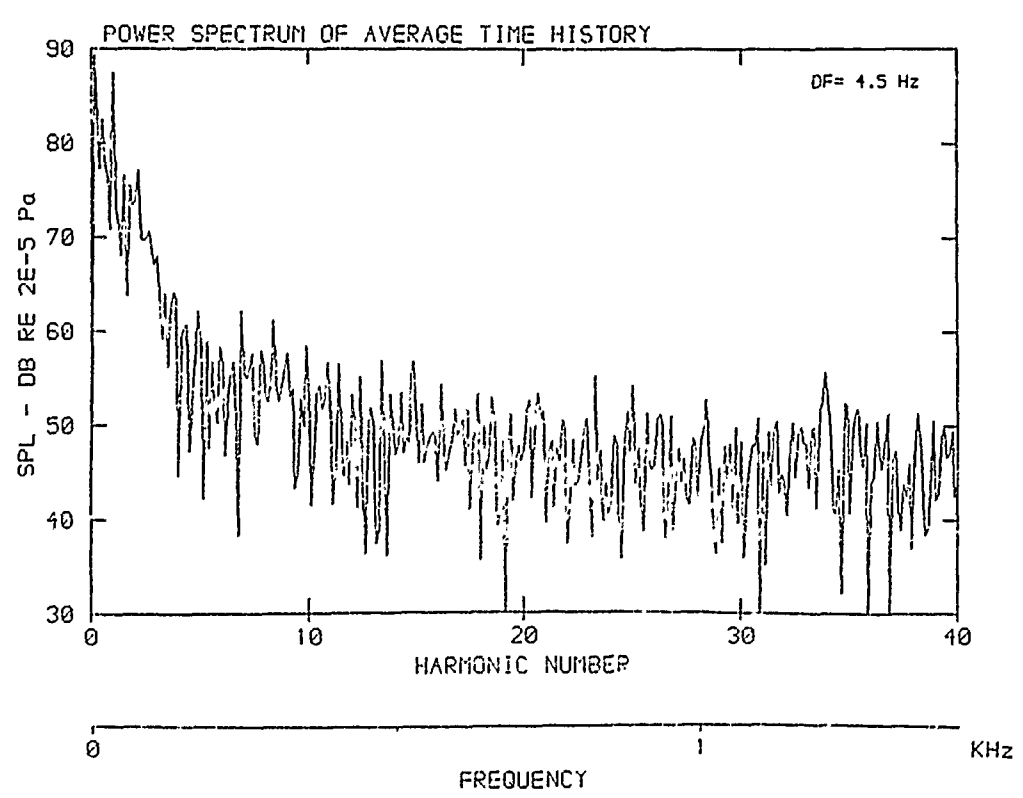
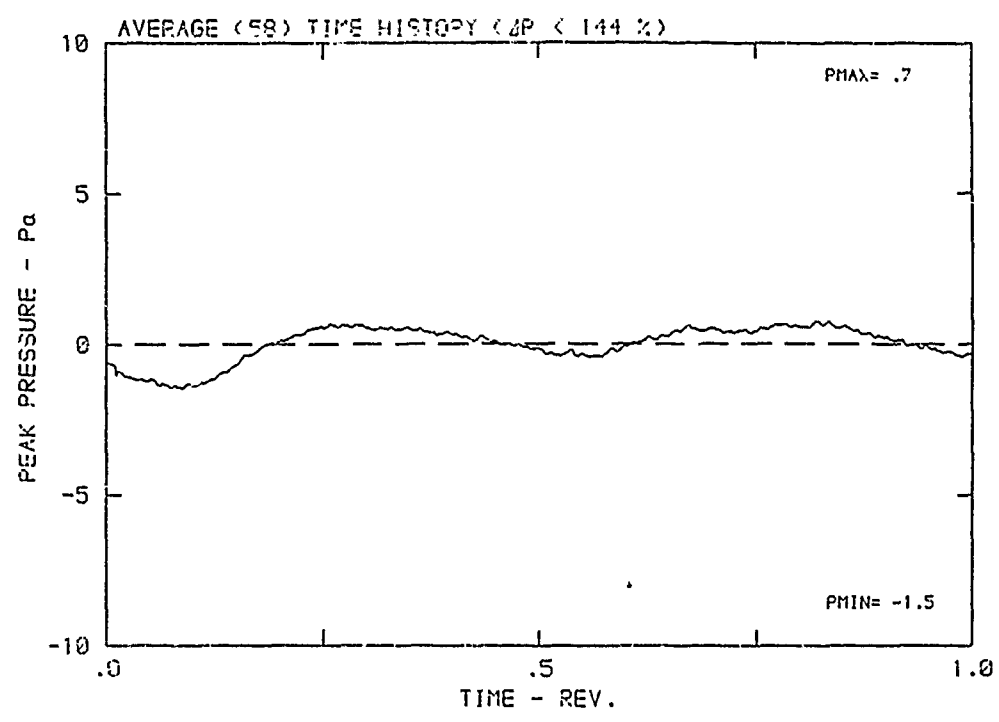
$\beta$ : 29.0°    MH: .3675    n: 1069 rpm     $v/u$ : .451     $\phi$ : .0°    T: 286.8 K





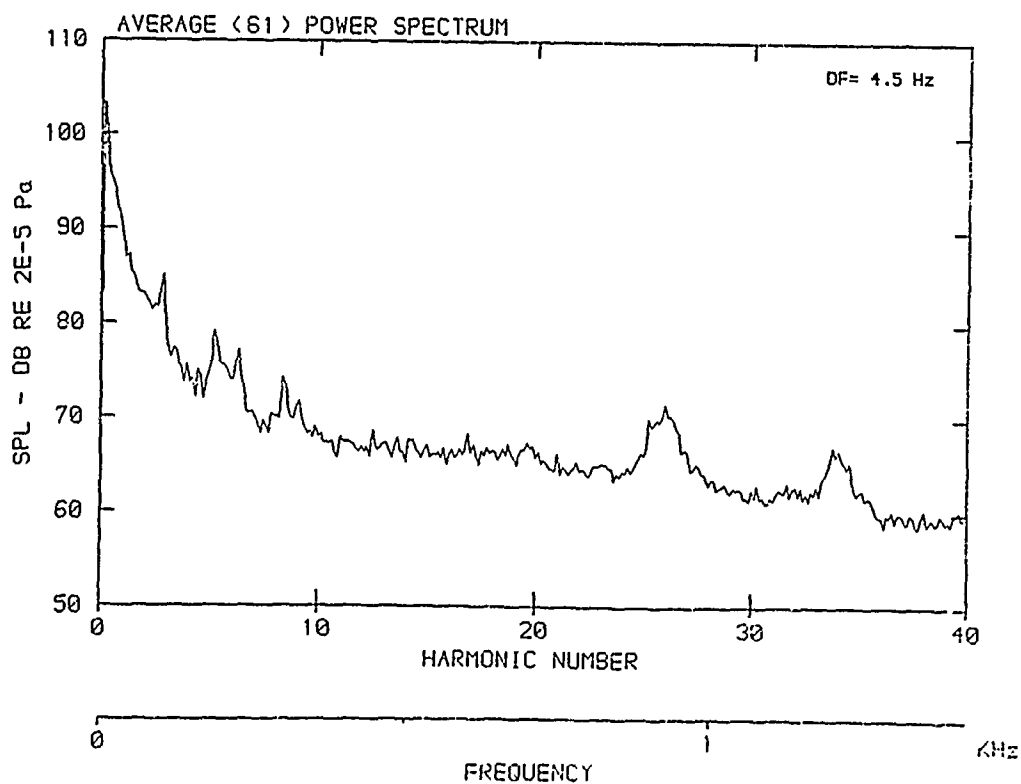
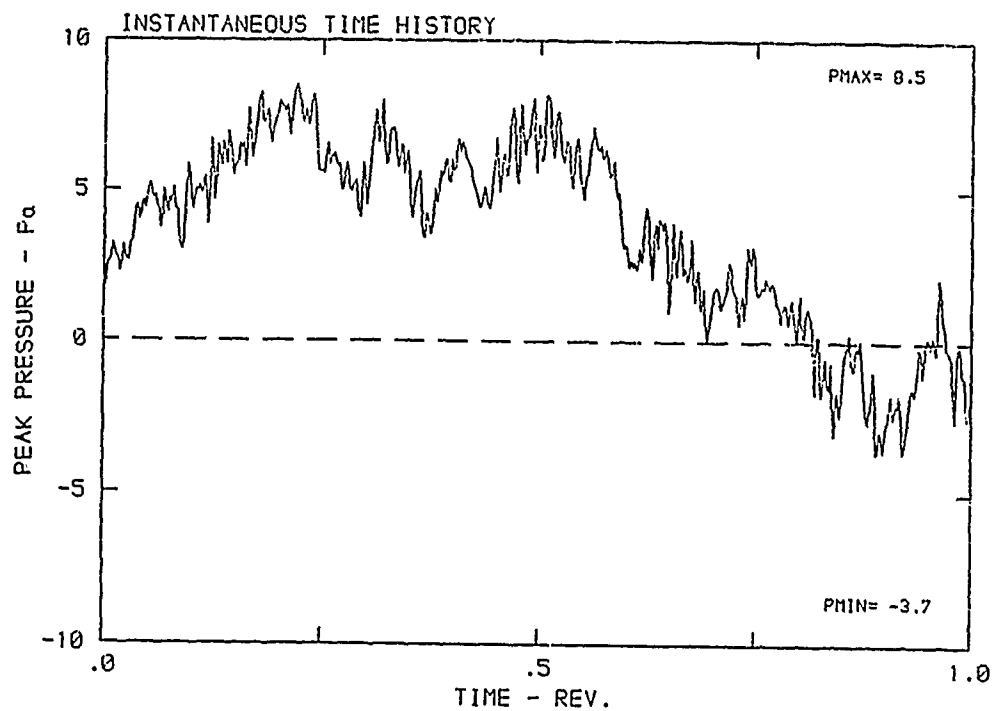
DATA POINT: DN-4    RUN: 96    MP: 6

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm     $v/u$ : .451     $\phi$ : .0°    T: 286.8 K



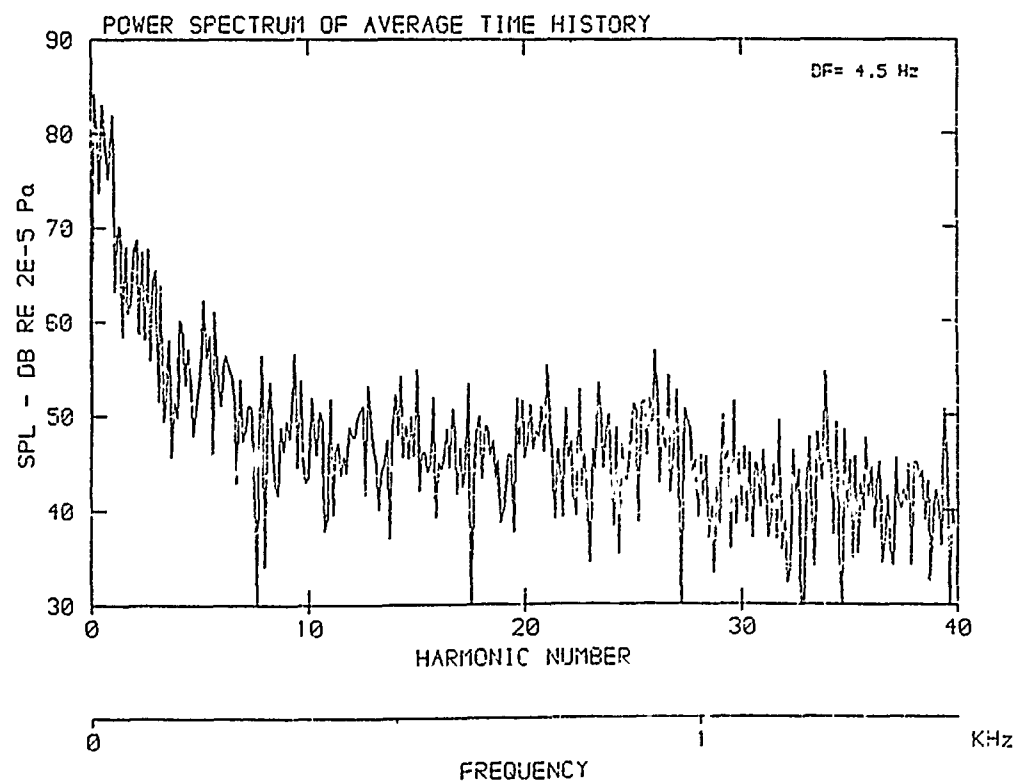
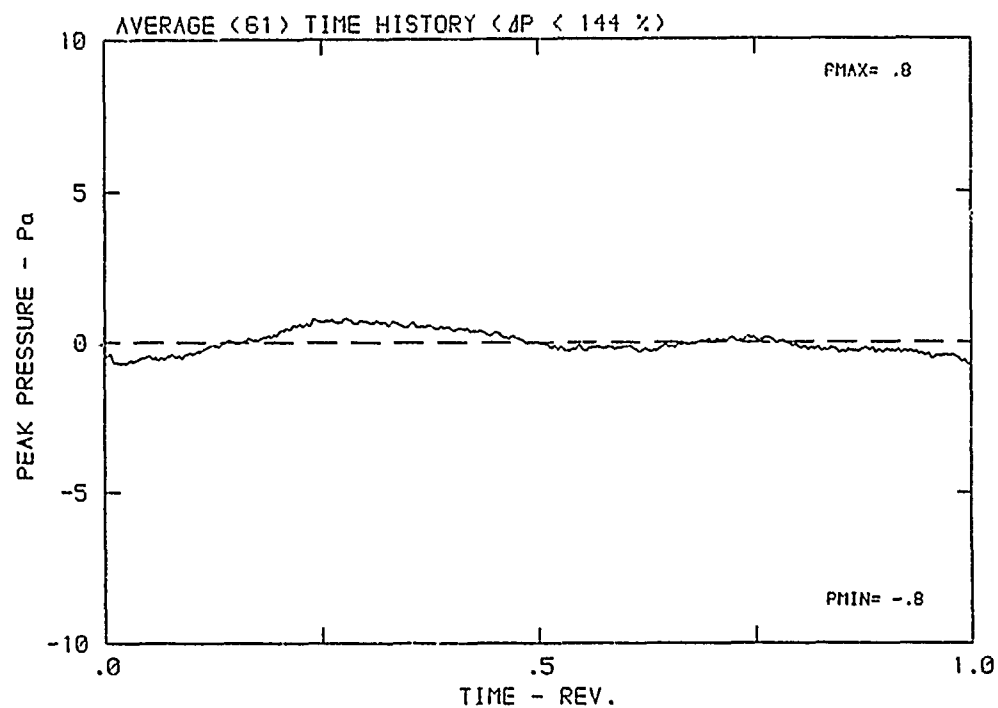
DATA POINT: DN-4    RUN: 96    MP: 7

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°     $\Gamma$ : 286.8 K



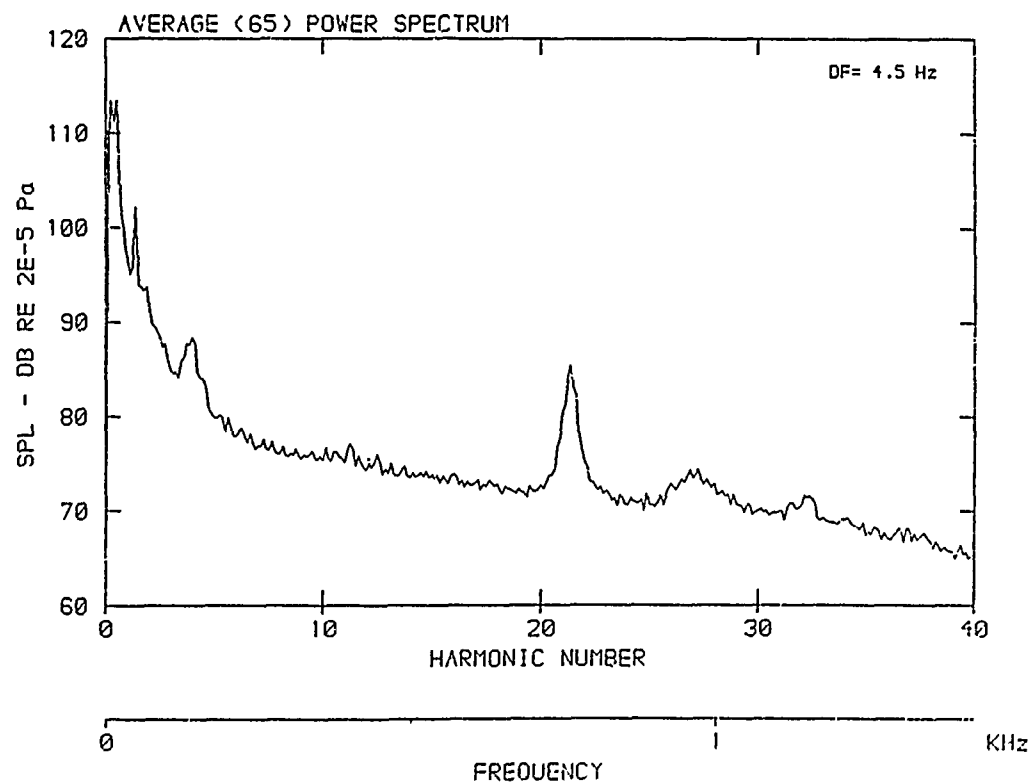
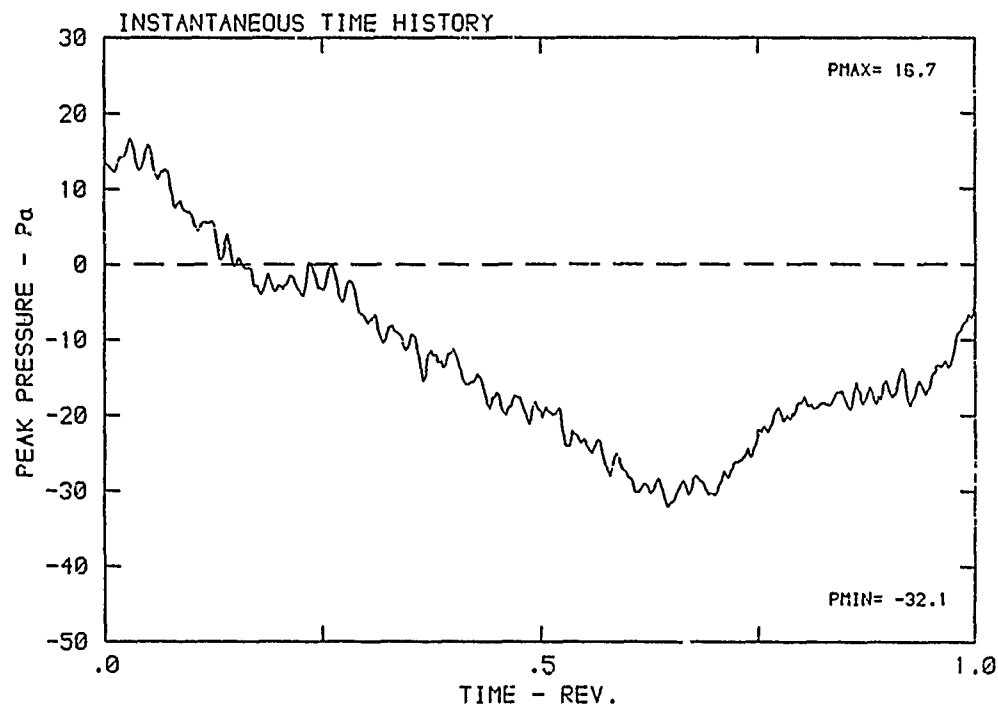
DATA POINT: DN-4    RUN: 96    MP: 7

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



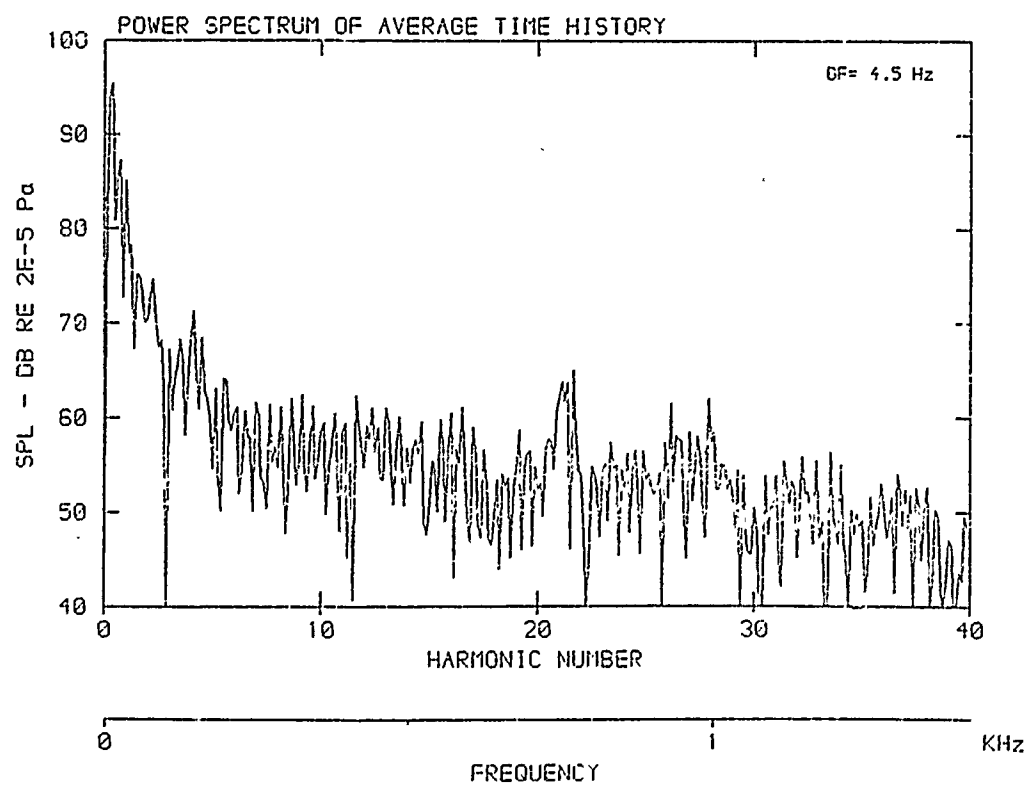
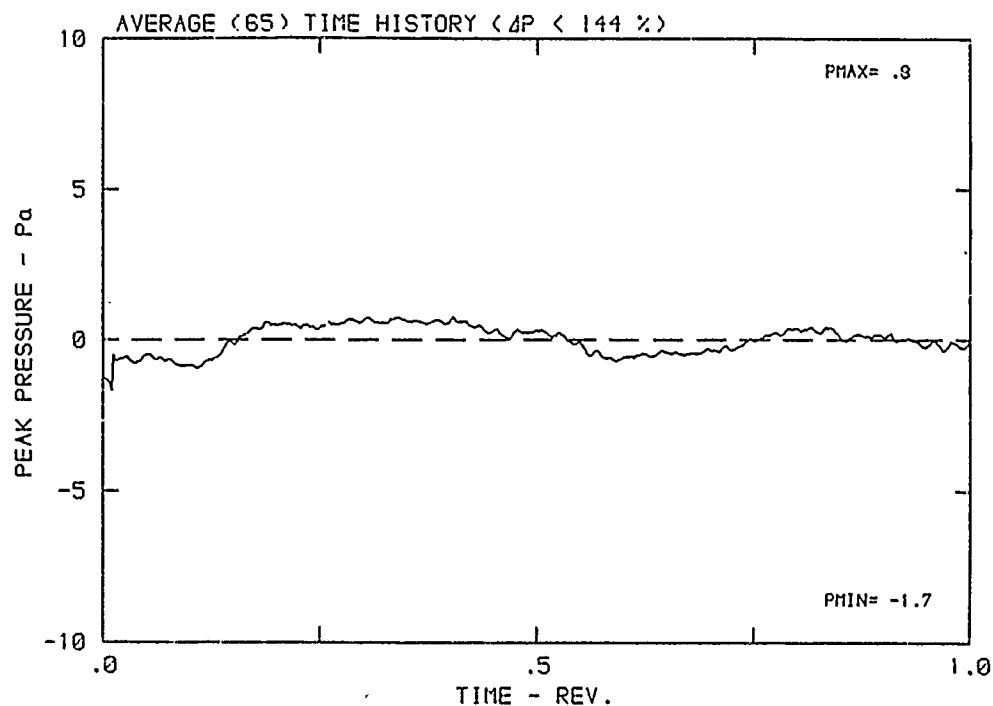
DATA POINT: DN-4 RUN: 96 MP: 9

$\beta$ : 29.0° MH: .3675 n: 1069 rpm  $v/u$ : .451  $\phi$ : .0°  $\tau$ : 286.8 K



DATA POINT: DN-4      RUN: 96      MP: 9

$\beta$ : 29.0°    MH: .3675    n: 1069 rpm    v/u: .451     $\phi$ : .0°    T: 286.8 K



## 6. Propeller Rotational Harmonic Noise- and Overall Noise Levels

From all spectra of averaged time-histories the harmonic pressure levels are determined under the presupposition of a 10 dB signal-to-noise ratio, and are submitted to the A-weighting function. Both linear and A-weighted harmonic levels as well as the respective overall pressure levels (calculated from the energy sum of harmonic levels) are listed in the following tables.

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64				AN-3 / 65		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	101.3	75.1	80.0	106.5	84.0	90.0	112.9	93.8	
2	140.0	93.2	77.1	160.0	103.1	89.7	180.0	107.5	96.6	
3	210.0	91.9	81.0	240.0	101.0	92.4	270.0	109.6	101.0	
4	280.0	84.5	75.9	320.0	98.3	91.7	360.0	107.5	102.7	
5	350.0	81.2	74.6	400.0	96.8	92.0	450.0	105.7	102.5	
6	420.0	77.9	73.1	480.0	89.0	85.8	540.0	99.2	96.0	
7	490.0	70.7	67.5	560.0	82.8	79.6	630.0	100.9	99.0	
8	560.0	64.2	61.0	640.0	82.7	80.8	720.0	101.0	100.2	
9	630.0	0.0	0.0	720.0	79.6	78.8	810.0	92.8	92.0	
10	700.0	0.0	0.0	800.0	76.1	75.3	900.0	94.6	94.6	
11	770.0	0.0	0.0	880.0	71.2	70.4	990.0	94.7	94.7	
12	840.0	0.0	0.0	960.0	68.8	68.8	1080.0	83.4	83.4	
13	910.0	0.0	0.0	1040.0	65.1	65.1	1170.0	81.7	82.3	
14	980.0	0.0	0.0	1120.0	49.8	49.8	1260.0	83.1	83.7	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	78.5	79.1	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	73.2	74.2	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	62.2	63.2	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		102.2	84.8			109.6	98.3			116.8
										109.4

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64			AN-3 / 65			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	105.0	78.8	80.0	107.9	85.4	90.0	113.5	94.4	
2	140.0	102.2	86.1	160.0	107.9	94.5	180.0	116.4	105.5	
3	210.0	97.5	86.6	240.0	104.8	96.2	270.0	110.8	102.2	
4	280.0	94.2	85.6	320.0	100.8	94.2	360.0	112.7	107.9	
5	350.0	89.2	82.6	400.0	99.1	94.3	450.0	111.1	107.9	
6	420.0	83.2	78.4	480.0	100.3	97.1	540.0	111.9	108.7	
7	490.0	78.7	75.5	560.0	96.4	93.2	630.0	110.3	108.4	
8	560.0	77.0	73.8	640.0	92.9	91.0	720.0	106.3	105.5	
9	630.0	0.0	0.0	720.0	88.2	87.4	810.0	106.6	105.8	
10	700.0	0.0	0.0	800.0	87.6	86.8	900.0	106.8	106.8	
11	770.0	0.0	0.0	880.0	86.4	85.6	990.0	104.0	104.0	
12	840.0	0.0	0.0	960.0	81.1	81.1	1080.0	101.2	101.2	
13	910.0	0.0	0.0	1040.0	77.8	77.8	1170.0	101.5	102.1	
14	980.0	0.0	0.0	1120.0	74.6	74.6	1260.0	99.5	100.1	
15	1050.0	0.0	0.0	1200.0	72.3	72.9	1350.0	99.0	99.6	
16	1120.0	0.0	0.0	1280.0	70.9	71.5	1440.0	95.8	96.8	
17	1190.0	0.0	0.0	1360.0	67.6	68.2	1530.0	94.1	95.1	
18	1260.0	0.0	0.0	1440.0	58.2	59.2	1620.0	93.4	94.4	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	90.1	91.1	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	87.3	88.5	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	86.5	87.7	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	86.9	88.1	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	83.4	84.6	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	81.3	82.5	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	80.1	81.4	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	78.7	80.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	76.4	77.7	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	74.7	76.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	75.0	76.3	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	72.2	73.5	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	71.4	72.7	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	67.8	69.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	67.2	68.4	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	66.6	67.8	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	66.2	67.4	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	60.3	61.5	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		107.6	92.1		112.9	103.6		122.0	117.3	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64			AN-3 / 65			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	106.7	80.5	80.0	110.4	87.9	90.0	115.3	96.2	
2	140.0	103.5	87.4	160.0	108.2	94.8	180.0	114.1	103.2	
3	210.0	98.2	87.3	240.0	106.8	98.2	270.0	113.5	104.9	
4	280.0	94.7	86.1	320.0	104.6	98.0	360.0	113.9	109.1	
5	350.0	88.2	81.6	400.0	104.3	99.5	450.0	113.4	110.2	
6	420.0	88.4	83.6	480.0	100.9	97.7	540.0	110.1	106.9	
7	490.0	84.1	80.9	560.0	96.6	93.4	630.0	111.1	109.2	
8	560.0	76.8	73.6	640.0	96.7	94.8	720.0	110.3	109.5	
9	630.0	0.0	0.0	720.0	94.4	93.6	810.0	109.0	108.2	
10	700.0	0.0	0.0	800.0	91.3	90.5	900.0	108.1	108.1	
11	770.0	0.0	0.0	880.0	88.0	87.2	990.0	107.5	107.5	
12	840.0	0.0	0.0	960.0	86.7	86.7	1080.0	105.8	105.8	
13	910.0	0.0	0.0	1040.0	84.1	84.1	1170.0	103.3	103.9	
14	980.0	0.0	0.0	1120.0	79.9	79.9	1260.0	105.3	105.9	
15	1050.0	0.0	0.0	1200.0	78.2	78.8	1350.0	103.9	104.5	
16	1120.0	0.0	0.0	1280.0	78.6	79.2	1440.0	102.3	103.3	
17	1190.0	0.0	0.0	1360.0	75.3	75.9	1530.0	101.6	102.6	
18	1260.0	0.0	0.0	1440.0	73.1	74.1	1620.0	101.8	102.8	
19	1330.0	0.0	0.0	1520.0	71.9	72.9	1710.0	98.9	99.9	
20	1400.0	0.0	0.0	1600.0	71.0	72.0	1800.0	95.8	97.0	
21	1470.0	0.0	0.0	1680.0	69.1	70.1	1890.0	95.2	96.4	
22	1540.0	0.0	0.0	1760.0	65.7	66.7	1980.0	91.6	92.8	
23	1610.0	0.0	0.0	1840.0	63.7	64.9	2070.0	84.8	86.0	
24	1680.0	0.0	0.0	1920.0	64.9	66.1	2160.0	78.9	80.1	
25	1750.0	0.0	0.0	2000.0	64.1	65.3	2250.0	77.7	79.0	
26	1820.0	0.0	0.0	2080.0	61.0	62.2	2340.0	82.8	84.1	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	82.9	84.2	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	85.9	87.2	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	86.9	88.2	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	86.6	87.9	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	86.0	87.3	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	85.7	86.9	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	84.0	85.2	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	81.6	82.8	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	77.7	78.9	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	74.8	76.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	69.8	71.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		109.0	93.3	114.9		106.2	123.0		119.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64			AN-3 / 65			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	108.3	82.1	80.0	112.9	90.4	90.0	116.9	97.8	
2	140.0	104.3	88.2	160.0	108.4	95.0	180.0	114.9	104.0	
3	210.0	98.2	87.3	240.0	108.7	100.1	270.0	116.9	108.3	
4	280.0	95.7	87.1	320.0	106.1	99.5	360.0	114.9	110.1	
5	350.0	92.7	86.1	400.0	102.4	97.6	450.0	114.1	110.9	
6	420.0	89.0	84.2	480.0	101.4	98.2	540.0	112.4	109.2	
7	490.0	82.1	78.9	560.0	100.3	97.1	630.0	113.6	111.7	
8	560.0	80.5	77.3	640.0	98.3	96.4	720.0	111.1	110.3	
9	630.0	78.1	76.2	720.0	93.9	93.1	810.0	110.8	110.0	
10	700.0	67.8	65.9	800.0	92.8	92.0	900.0	109.9	109.9	
11	770.0	68.1	67.3	880.0	90.7	89.9	990.0	108.2	108.2	
12	840.0	63.3	62.5	960.0	86.2	86.2	1080.0	107.4	107.4	
13	910.0	0.0	0.0	1040.0	85.9	85.9	1170.0	106.9	107.5	
14	980.0	0.0	0.0	1120.0	83.3	83.3	1260.0	103.4	104.0	
15	1050.0	0.0	0.0	1200.0	79.7	80.3	1350.0	104.4	105.0	
16	1120.0	0.0	0.0	1280.0	75.1	75.7	1440.0	102.5	103.5	
17	1190.0	0.0	0.0	1360.0	75.4	76.0	1530.0	99.9	100.9	
18	1260.0	0.0	0.0	1440.0	72.5	73.5	1620.0	98.7	99.7	
19	1330.0	0.0	0.0	1520.0	68.1	69.1	1710.0	98.1	99.1	
20	1400.0	0.0	0.0	1600.0	66.8	67.8	1800.0	96.7	97.9	
21	1470.0	0.0	0.0	1680.0	64.9	65.9	1890.0	94.0	95.2	
22	1540.0	0.0	0.0	1760.0	64.5	65.5	1980.0	92.6	93.8	
23	1610.0	0.0	0.0	1840.0	61.1	62.3	2070.0	91.2	92.4	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	89.6	90.8	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	88.2	89.5	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	87.3	88.6	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	86.1	87.4	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	85.2	86.5	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	84.7	86.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	82.8	84.1	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	81.4	82.7	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	81.3	82.5	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	79.0	80.2	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	77.3	78.5	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	78.1	79.3	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	75.6	76.8	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	73.7	74.9	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	73.3	74.5	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	71.9	73.1	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	68.8	69.8	
OASPL		110.3	94.3	116.4		107.1	124.6		120.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64			AN-3 / 65			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	109.8	83.6	80.0	114.9	92.4	90.0	118.5	99.4	
2	140.0	105.3	89.2	160.0	109.3	95.9	180.0	114.4	103.5	
3	210.0	96.4	85.5	240.0	106.7	98.1	270.0	116.3	107.7	
4	280.0	95.8	87.2	320.0	109.0	102.4	360.0	117.0	112.2	
5	350.0	94.8	88.2	400.0	105.1	100.3	450.0	109.7	106.5	
6	420.0	84.7	79.9	480.0	98.1	94.9	540.0	112.5	109.3	
7	490.0	81.5	78.3	560.0	98.7	95.5	630.0	113.8	111.9	
8	560.0	79.2	76.0	640.0	97.9	96.0	720.0	108.9	108.1	
9	630.0	75.7	73.8	720.0	93.4	92.6	810.0	109.0	108.2	
10	700.0	71.5	69.6	800.0	89.6	88.8	900.0	107.3	107.3	
11	770.0	60.9	60.1	880.0	87.5	86.7	990.0	107.5	107.5	
12	840.0	0.0	0.0	960.0	87.9	87.9	1080.0	105.0	105.0	
13	910.0	0.0	0.0	1040.0	84.5	84.5	1170.0	103.7	104.3	
14	980.0	0.0	0.0	1120.0	80.7	80.7	1260.0	103.6	104.2	
15	1050.0	0.0	0.0	1200.0	78.1	78.7	1350.0	100.8	101.4	
16	1120.0	0.0	0.0	1280.0	76.9	77.5	1440.0	99.2	100.2	
17	1190.0	0.0	0.0	1360.0	72.3	72.9	1530.0	98.1	99.1	
18	1260.0	0.0	0.0	1440.0	67.6	68.6	1620.0	95.7	96.7	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	93.4	94.4	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	93.5	94.7	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	90.3	91.5	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	89.2	90.4	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	89.8	91.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	85.4	86.6	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	84.9	86.2	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	83.7	85.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	79.8	81.1	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	81.6	82.9	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	76.1	77.4	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	76.8	78.1	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	77.7	79.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	71.4	72.6	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	73.3	74.5	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	74.6	75.8	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	65.0	66.2	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		111.5	94.5		117.6	107.4		124.5	119.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64			AN-3 / 65			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	53.2	27.0	80.0	50.9	28.4	90.0	70.0	50.9	
2	140.0	0.0	0.0	160.0	0.0	0.0	180.0	0.0	0.0	
3	210.0	0.0	0.0	240.0	0.0	0.0	270.0	0.0	0.0	
4	280.0	0.0	0.0	320.0	0.0	0.0	360.0	0.0	0.0	
5	350.0	0.0	0.0	400.0	0.0	0.0	450.0	0.0	0.0	
6	420.0	0.0	0.0	480.0	0.0	0.0	540.0	0.0	0.0	
7	490.0	0.0	0.0	560.0	0.0	0.0	630.0	0.0	0.0	
8	560.0	0.0	0.0	640.0	0.0	0.0	720.0	0.0	0.0	
9	630.0	0.0	0.0	720.0	0.0	0.0	810.0	0.0	0.0	
10	700.0	0.0	0.0	800.0	0.0	0.0	900.0	0.0	0.0	
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0	
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0	
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		53.2	27.0		50.9	28.4		70.0	50.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-1 / 63				AN-2 / 64			AN-3 / 65			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	107.7	81.5	80.0	113.0	90.5	90.0	118.3	99.2	
2	140.0	95.7	79.6	160.0	101.3	87.9	180.0	111.3	100.4	
3	210.0	88.4	77.5	240.0	100.4	91.8	270.0	103.4	94.8	
4	280.0	80.2	71.6	320.0	93.5	86.9	360.0	103.3	98.5	
5	350.0	0.0	0.0	400.0	89.9	85.1	450.0	92.5	89.3	
6	420.0	0.0	0.0	480.0	82.1	78.9	540.0	94.5	91.3	
7	490.0	0.0	0.0	560.0	0.0	0.0	630.0	92.9	91.0	
8	560.0	0.0	0.0	640.0	0.0	0.0	720.0	86.9	86.1	
9	630.0	0.0	0.0	720.0	0.0	0.0	810.0	88.2	87.4	
10	700.0	0.0	0.0	800.0	0.0	0.0	900.0	76.3	76.3	
11	770.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0	
12	840.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0	
13	910.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0	
14	980.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0	
15	1050.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0	
16	1120.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0	
17	1190.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1260.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1330.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		108.0	84.8	113.6		96.2	119.3		105.3	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN											
AN-1 / 63				AN-2 / 64			AN-3 / 65				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	70.0	105.4	79.2	80.0	110.6	88.1	90.0	115.1	96.0		
2	140.0	103.7	87.6	160.0	106.1	92.7	180.0	111.3	100.4		
3	210.0	94.6	83.7	240.0	105.7	97.1	270.0	117.0	108.4		
4	280.0	97.6	89.0	320.0	106.7	100.1	360.0	114.7	109.9		
5	350.0	93.6	87.0	400.0	100.7	95.9	450.0	111.7	108.5		
6	420.0	80.6	75.8	480.0	100.0	96.8	540.0	113.4	110.2		
7	490.0	80.2	77.0	560.0	99.6	96.4	630.0	111.2	109.3		
8	560.0	79.1	75.9	640.0	95.2	93.3	720.0	109.0	108.2		
9	630.0	77.7	75.8	720.0	91.6	90.8	810.0	111.0	110.2		
10	700.0	65.8	63.9	800.0	92.6	91.8	900.0	106.9	106.9		
11	770.0	0.0	0.0	880.0	88.9	88.1	990.0	105.9	105.9		
12	840.0	0.0	0.0	960.0	84.0	84.0	1080.0	106.6	106.6		
13	910.0	0.0	0.0	1040.0	85.4	85.4	1170.0	105.7	106.3		
14	980.0	0.0	0.0	1120.0	81.1	81.1	1260.0	100.4	101.0		
15	1050.0	0.0	0.0	1200.0	80.4	81.0	1350.0	102.8	103.4		
16	1120.0	0.0	0.0	1280.0	70.5	71.1	1440.0	101.4	102.4		
17	1190.0	0.0	0.0	1360.0	73.4	74.0	1530.0	97.3	98.3		
18	1260.0	0.0	0.0	1440.0	72.4	73.4	1620.0	97.6	98.6		
19	1330.0	0.0	0.0	1520.0	66.5	67.5	1710.0	95.6	96.6		
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	93.6	94.8		
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	93.9	95.1		
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	90.3	91.5		
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	89.8	91.0		
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	90.8	92.0		
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	82.8	84.1		
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	85.2	86.5		
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	84.8	86.1		
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	80.2	81.5		
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	81.6	82.9		
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	80.8	82.1		
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	79.0	80.3		
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	80.6	81.8		
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	77.4	78.6		
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	75.7	76.9		
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	74.4	75.6		
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	74.1	75.3		
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	67.3	68.5		
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	71.1	72.3		
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	71.9	73.1		
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	68.6	69.6		
OASPL		108.4	93.7			114.4	105.7			123.4	119.4

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68				AN-4 / 67			AN-5 / 66			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	102.2	79.7	80.0	106.3	83.8	90.0	111.9	92.8	
2	146.0	97.9	84.5	160.0	101.2	87.8	180.0	108.2	97.3	
3	219.0	94.8	83.9	240.0	100.4	91.8	270.0	109.0	100.4	
4	292.0	89.9	83.3	320.0	97.6	91.0	360.0	106.5	101.7	
5	365.0	86.3	81.5	400.0	94.2	89.4	450.0	104.6	101.4	
6	438.0	78.6	73.8	480.0	89.3	86.1	540.0	100.0	96.8	
7	511.0	74.9	71.7	560.0	83.1	79.9	630.0	101.2	99.3	
8	584.0	65.2	63.3	640.0	80.6	78.7	720.0	99.9	99.1	
9	657.0	0.0	0.0	720.0	81.0	80.2	810.0	94.0	93.2	
10	730.0	0.0	0.0	800.0	72.7	71.9	900.0	94.4	94.4	
11	803.0	0.0	0.0	880.0	71.4	70.6	990.0	91.6	91.6	
12	876.0	0.0	0.0	960.0	68.2	68.2	1080.0	85.4	85.4	
13	949.0	0.0	0.0	1040.0	67.1	67.1	1170.0	85.3	85.9	
14	1022.0	0.0	0.0	1120.0	54.2	54.2	1260.0	82.1	82.7	
15	1095.0	0.0	0.0	1200.0	0.0	0.0	1350.0	78.1	78.7	
16	1168.0	0.0	0.0	1280.0	0.0	0.0	1440.0	76.4	77.4	
17	1241.0	0.0	0.0	1360.0	0.0	0.0	1530.0	80.5	81.5	
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	72.5	73.5	
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	64.6	65.6	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		104.4	90.1	108.8		97.2	116.2		108.8	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68			AN-4 / 67			AN-5 / 66				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	104.1	81.6	80.0	106.3	83.8	90.0	112.3	93.2	
2	146.0	100.4	87.0	160.0	105.8	92.4	180.0	112.9	102.0	
3	219.0	97.5	86.6	240.0	103.5	94.9	270.0	111.5	102.9	
4	292.0	96.3	89.7	320.0	101.6	95.0	360.0	112.6	107.8	
5	365.0	91.1	86.3	400.0	100.5	95.7	450.0	111.7	108.5	
6	438.0	0.0	0.0	480.0	99.2	96.0	540.0	111.9	108.7	
7	511.0	0.0	0.0	560.0	96.4	93.2	630.0	109.6	107.7	
8	584.0	0.0	0.0	640.0	92.6	90.7	720.0	106.2	105.4	
9	657.0	0.0	0.0	720.0	88.4	87.6	810.0	106.7	105.9	
10	730.0	0.0	0.0	800.0	88.2	87.4	900.0	106.7	106.7	
11	803.0	0.0	0.0	880.0	85.2	84.4	990.0	103.6	103.6	
12	876.0	0.0	0.0	960.0	81.5	81.5	1080.0	101.1	101.1	
13	949.0	0.0	0.0	1040.0	78.1	78.1	1170.0	101.3	101.9	
14	1022.0	0.0	0.0	1120.0	76.3	76.3	1260.0	99.2	99.8	
15	1095.0	0.0	0.0	1200.0	73.8	74.4	1350.0	98.6	99.2	
16	1168.0	0.0	0.0	1280.0	64.4	65.0	1440.0	95.2	96.2	
17	1241.0	0.0	0.0	1360.0	0.0	0.0	1530.0	93.2	94.2	
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	92.6	93.6	
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	89.9	90.9	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	87.6	88.8	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	84.6	85.8	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	86.7	87.9	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	82.6	83.8	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	79.9	81.1	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	78.9	80.2	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	77.7	79.0	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	76.4	77.7	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	73.5	74.8	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	74.9	76.2	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	72.4	73.7	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	69.6	70.9	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	65.8	67.0	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
CASPL		106.8	93.9		111.6	103.2		121.1	117.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68				AN-4 / 67			AN-5 / 66			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	102.9	80.4	80.0	106.9	84.4	90.0	114.2	95.1	
2	146.0	102.5	89.1	160.0	105.8	92.4	180.0	113.1	102.2	
3	219.0	98.5	87.6	240.0	105.7	97.1	270.0	112.8	104.2	
4	292.0	95.7	89.1	320.0	103.1	96.5	360.0	113.3	108.5	
5	365.0	95.3	90.5	400.0	103.3	98.5	450.0	112.8	109.6	
6	438.0	91.9	87.1	480.0	100.6	97.4	540.0	109.6	106.4	
7	511.0	87.7	84.5	560.0	96.4	93.2	630.0	110.9	109.0	
8	584.0	83.5	81.6	640.0	96.2	94.3	720.0	110.4	109.6	
9	657.0	81.5	79.6	720.0	94.7	93.9	810.0	108.8	108.0	
10	730.0	78.6	77.8	800.0	91.4	90.6	900.0	107.9	107.9	
11	803.0	74.3	73.5	880.0	88.0	87.2	990.0	107.8	107.8	
12	876.0	69.4	68.6	960.0	86.6	86.6	1080.0	106.1	106.1	
13	949.0	0.0	0.0	1040.0	83.0	83.0	1170.0	103.4	104.0	
14	1022.0	0.0	0.0	1120.0	79.8	79.8	1260.0	105.4	106.0	
15	1095.0	0.0	0.0	1200.0	77.3	77.9	1350.0	103.7	104.3	
16	1168.0	0.0	0.0	1280.0	77.5	78.1	1440.0	101.6	102.6	
17	1241.0	0.0	0.0	1360.0	71.5	72.1	1530.0	100.6	101.6	
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	100.6	101.6	
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	97.0	98.0	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	93.1	94.3	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	91.9	93.1	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	88.4	89.6	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	81.4	82.6	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	77.6	78.8	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	84.7	86.0	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	85.7	87.0	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	85.8	87.1	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	87.3	88.6	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	87.0	88.3	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	86.2	87.5	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	84.9	86.2	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	83.9	85.1	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	81.1	82.3	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	77.1	78.3	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	73.3	74.5	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	70.7	71.9	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	67.5	68.7	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	73.8	75.0	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	74.7	75.9	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	74.0	75.0	
OASPL		107.3	96.6		112.8	105.3		122.4	119.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68			AN-4 / 67			AN-5 / 66				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	103.6	81.1	80.0	107.7	85.2	90.0	115.2	96.1	
2	146.0	102.5	89.1	160.0	104.9	91.5	180.0	113.3	102.4	
3	219.0	99.0	88.1	240.0	105.9	97.3	270.0	115.4	106.8	
4	292.0	97.0	90.4	320.0	103.2	96.6	360.0	113.8	109.0	
5	365.0	95.5	90.7	400.0	101.1	96.3	450.0	113.4	110.2	
6	438.0	90.2	85.4	480.0	100.2	97.0	540.0	111.4	108.2	
7	511.0	87.2	84.0	560.0	98.9	95.7	630.0	113.2	111.3	
8	584.0	86.2	84.3	640.0	96.7	94.8	720.0	110.2	109.4	
9	657.0	81.5	79.6	720.0	93.4	92.6	810.0	110.0	109.2	
10	730.0	74.9	74.1	800.0	91.7	90.9	900.0	109.6	109.6	
11	803.0	0.0	0.0	880.0	89.6	88.8	990.0	107.5	107.5	
12	876.0	0.0	0.0	960.0	86.1	86.1	1080.0	106.7	106.7	
13	949.0	0.0	0.0	1040.0	84.9	84.9	1170.0	106.5	107.1	
14	1022.0	0.0	0.0	1120.0	83.1	83.1	1260.0	102.8	103.4	
15	1095.0	0.0	0.0	1200.0	78.2	78.8	1350.0	103.5	104.1	
16	1168.0	0.0	0.0	1280.0	75.4	76.0	1440.0	102.2	103.2	
17	1241.0	0.0	0.0	1360.0	73.8	74.4	1530.0	99.4	100.4	
18	1314.0	0.0	0.0	1440.0	71.6	72.6	1620.0	97.8	98.8	
19	1387.0	0.0	0.0	1520.0	68.2	69.2	1710.0	97.3	98.3	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	96.0	97.2	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	93.0	94.2	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	92.0	93.2	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	90.8	92.0	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	88.4	89.6	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	87.4	88.7	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	86.7	88.0	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	85.7	87.0	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	84.5	85.8	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	83.7	85.0	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	82.0	83.3	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	81.0	82.3	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	79.7	80.9	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	77.7	78.9	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	76.0	77.2	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	76.5	77.7	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	74.0	75.2	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	71.7	72.9	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	71.9	73.1	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	71.0	72.2	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	69.9	70.9	
OASPL		107.7	96.8		112.8	105.1		123.5	119.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68			AN-4 / 67			AN-5 / 66				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	104.1	81.6	80.0	108.6	86.1	90.0	116.9	97.8	
2	146.0	101.9	88.5	160.0	104.6	91.2	180.0	111.5	100.6	
3	219.0	95.1	84.2	240.0	103.1	94.5	270.0	114.6	106.0	
4	292.0	95.5	88.9	320.0	106.1	99.5	360.0	116.4	111.6	
5	365.0	96.1	91.3	400.0	101.5	96.7	450.0	108.8	105.6	
6	438.0	87.3	82.5	480.0	95.0	91.8	540.0	111.5	108.3	
7	511.0	84.4	81.2	560.0	96.9	93.7	630.0	112.8	110.9	
8	584.0	80.4	78.5	640.0	95.8	93.9	720.0	108.0	107.2	
9	657.0	0.0	0.0	720.0	90.2	89.4	810.0	107.8	107.0	
10	730.0	0.0	0.0	800.0	88.7	87.9	900.0	106.8	106.8	
11	803.0	0.0	0.0	880.0	85.8	85.0	990.0	106.8	106.8	
12	876.0	0.0	0.0	960.0	83.4	83.4	1080.0	104.0	104.0	
13	949.0	0.0	0.0	1040.0	82.7	82.7	1170.0	103.3	103.9	
14	1022.0	0.0	0.0	1120.0	78.9	78.9	1260.0	103.0	103.6	
15	1095.0	0.0	0.0	1200.0	74.8	75.4	1350.0	100.0	100.6	
16	1168.0	0.0	0.0	1280.0	0.0	0.0	1440.0	98.6	99.6	
17	1241.0	0.0	0.0	1360.0	0.0	0.0	1530.0	97.7	98.7	
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	95.2	96.2	
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	93.4	94.4	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	93.4	94.6	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	90.3	91.5	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	89.2	90.4	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	89.2	90.4	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	86.0	87.2	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	84.4	85.7	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	83.7	85.0	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	80.4	81.7	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	80.9	82.2	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	75.1	76.4	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	77.1	78.4	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	76.7	78.0	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	70.2	71.4	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	71.7	72.9	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	73.1	74.3	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	63.8	65.0	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	69.7	70.9	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	69.3	70.5	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	59.8	61.0	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		107.3	95.6		112.8	104.3		123.2	118.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68				AN-4 / 67			AN-5 / 66			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	50.2	27.7	80.0	52.7	30.2	90.0	73.6	54.5	
2	146.0	0.0	0.0	160.0	0.0	0.0	180.0	0.0	0.0	
3	219.0	0.0	0.0	240.0	0.0	0.0	270.0	0.0	0.0	
4	292.0	0.0	0.0	320.0	0.0	0.0	360.0	0.0	0.0	
5	365.0	0.0	0.0	400.0	0.0	0.0	450.0	0.0	0.0	
6	438.0	0.0	0.0	480.0	0.0	0.0	540.0	0.0	0.0	
7	511.0	0.0	0.0	560.0	0.0	0.0	630.0	0.0	0.0	
8	584.0	0.0	0.0	640.0	0.0	0.0	720.0	0.0	0.0	
9	657.0	0.0	0.0	720.0	0.0	0.0	810.0	0.0	0.0	
10	730.0	0.0	0.0	800.0	0.0	0.0	900.0	0.0	0.0	
11	803.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0	
12	876.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0	
13	949.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0	
14	1022.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0	
15	1095.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0	
16	1168.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0	
17	1241.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0	
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0	
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		50.2	27.7		52.7	30.2		73.6	54.5	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN									
AN-7 / 68			AN-4 / 67			AN-5 / 66			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	73.0	104.2	81.7	80.0	109.9	87.4	90.0	116.1	97.0
2	146.0	0.0	0.0	160.0	0.0	0.0	180.0	0.0	0.0
3	219.0	0.0	0.0	240.0	0.0	0.0	270.0	0.0	0.0
4	292.0	0.0	0.0	320.0	0.0	0.0	360.0	0.0	0.0
5	365.0	0.0	0.0	400.0	0.0	0.0	450.0	0.0	0.0
6	438.0	0.0	0.0	480.0	0.0	0.0	540.0	0.0	0.0
7	511.0	0.0	0.0	560.0	0.0	0.0	630.0	0.0	0.0
8	584.0	0.0	0.0	640.0	0.0	0.0	720.0	0.0	0.0
9	657.0	0.0	0.0	720.0	0.0	0.0	810.0	0.0	0.0
10	730.0	0.0	0.0	800.0	0.0	0.0	900.0	0.0	0.0
11	803.0	0.0	0.0	880.0	0.0	0.0	990.0	0.0	0.0
12	876.0	0.0	0.0	960.0	0.0	0.0	1080.0	0.0	0.0
13	949.0	0.0	0.0	1040.0	0.0	0.0	1170.0	0.0	0.0
14	1022.0	0.0	0.0	1120.0	0.0	0.0	1260.0	0.0	0.0
15	1095.0	0.0	0.0	1200.0	0.0	0.0	1350.0	0.0	0.0
16	1168.0	0.0	0.0	1280.0	0.0	0.0	1440.0	0.0	0.0
17	1241.0	0.0	0.0	1360.0	0.0	0.0	1530.0	0.0	0.0
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	0.0	0.0
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	0.0	0.0
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	0.0	0.0
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	0.0	0.0
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	0.0	0.0
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	0.0	0.0
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	0.0	0.0
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	0.0	0.0
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	0.0	0.0
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	0.0	0.0
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	0.0	0.0
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	0.0	0.0
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	0.0	0.0
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	0.0	0.0
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	0.0	0.0
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	0.0	0.0
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	0.0	0.0
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	0.0	0.0
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	0.0	0.0
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	0.0	0.0
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0
OASPL		104.2	81.7	109.9		87.4	116.1		97.0

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 20.8 DEG )

DATA-POINT / RUN										
AN-7 / 68				AN-4 / 67			AN-5 / 66			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	73.0	102.0	79.5	80.0	107.2	84.7	90.0	113.6	94.5	
2	146.0	98.2	84.8	160.0	103.4	90.0	180.0	109.9	99.0	
3	219.0	92.8	81.9	240.0	103.6	95.0	270.0	115.9	107.3	
4	292.0	97.6	91.0	320.0	104.9	98.3	360.0	113.5	108.7	
5	365.0	93.6	88.8	400.0	99.0	94.2	450.0	110.5	107.3	
6	438.0	87.1	82.3	480.0	98.3	95.1	540.0	112.7	109.5	
7	511.0	87.4	84.2	560.0	97.9	94.7	630.0	109.6	107.7	
8	584.0	84.0	82.1	640.0	93.7	91.8	720.0	108.9	108.1	
9	657.0	78.5	76.6	720.0	92.1	91.3	810.0	110.2	109.4	
10	730.0	75.9	75.1	800.0	91.4	90.6	900.0	105.8	105.8	
11	803.0	0.0	0.0	880.0	87.2	86.4	990.0	105.7	105.7	
12	876.0	0.0	0.0	960.0	84.0	84.0	1080.0	106.3	106.3	
13	949.0	0.0	0.0	1040.0	84.1	84.1	1170.0	104.5	105.1	
14	1022.0	0.0	0.0	1120.0	81.3	81.3	1260.0	100.3	100.9	
15	1095.0	0.0	0.0	1200.0	73.2	73.8	1350.0	102.1	102.7	
16	1168.0	0.0	0.0	1280.0	0.0	0.0	1440.0	100.7	101.7	
17	1241.0	0.0	0.0	1360.0	0.0	0.0	1530.0	97.3	98.3	
18	1314.0	0.0	0.0	1440.0	0.0	0.0	1620.0	97.4	98.4	
19	1387.0	0.0	0.0	1520.0	0.0	0.0	1710.0	95.2	96.2	
20	1460.0	0.0	0.0	1600.0	0.0	0.0	1800.0	93.5	94.7	
21	1533.0	0.0	0.0	1680.0	0.0	0.0	1890.0	93.4	94.6	
22	1606.0	0.0	0.0	1760.0	0.0	0.0	1980.0	89.2	90.4	
23	1679.0	0.0	0.0	1840.0	0.0	0.0	2070.0	89.7	90.9	
24	1752.0	0.0	0.0	1920.0	0.0	0.0	2160.0	90.4	91.6	
25	1825.0	0.0	0.0	2000.0	0.0	0.0	2250.0	81.3	82.6	
26	1898.0	0.0	0.0	2080.0	0.0	0.0	2340.0	85.9	87.2	
27	1971.0	0.0	0.0	2160.0	0.0	0.0	2430.0	84.3	85.6	
28	2044.0	0.0	0.0	2240.0	0.0	0.0	2520.0	80.2	81.5	
29	2117.0	0.0	0.0	2320.0	0.0	0.0	2610.0	82.1	83.4	
30	2190.0	0.0	0.0	2400.0	0.0	0.0	2700.0	79.7	81.0	
31	2263.0	0.0	0.0	2480.0	0.0	0.0	2790.0	78.9	80.2	
32	2336.0	0.0	0.0	2560.0	0.0	0.0	2880.0	79.9	81.1	
33	2409.0	0.0	0.0	2640.0	0.0	0.0	2970.0	76.5	77.7	
34	2482.0	0.0	0.0	2720.0	0.0	0.0	3060.0	75.5	76.7	
35	2555.0	0.0	0.0	2800.0	0.0	0.0	3150.0	74.7	75.9	
36	2628.0	0.0	0.0	2880.0	0.0	0.0	3240.0	75.4	76.6	
37	2701.0	0.0	0.0	2960.0	0.0	0.0	3330.0	70.2	71.4	
38	2774.0	0.0	0.0	3040.0	0.0	0.0	3420.0	0.0	0.0	
39	2847.0	0.0	0.0	3120.0	0.0	0.0	3510.0	0.0	0.0	
40	2920.0	0.0	0.0	3200.0	0.0	0.0	3600.0	0.0	0.0	
OASPL		105.3	95.1				111.9	104.0		
									122.4	118.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57				BN-3 / 56		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	99.1	72.9	70.0	103.1	76.9	80.0	107.3	84.8	
2	120.0	89.0	72.9	140.0	95.0	78.9	160.0	104.2	90.8	
3	180.0	76.3	65.4	210.0	92.1	81.2	240.0	100.3	91.7	
4	240.0	76.4	67.8	280.0	87.5	78.9	320.0	96.7	90.1	
5	300.0	67.2	60.6	350.0	81.7	75.1	400.0	96.0	91.2	
6	360.0	59.0	54.2	420.0	75.3	70.5	480.0	87.1	83.9	
7	420.0	52.8	48.0	490.0	65.5	62.3	560.0	82.9	79.7	
8	480.0	54.3	51.1	560.0	64.6	61.4	640.0	80.0	78.1	
9	540.0	50.8	47.6	630.0	44.6	42.7	720.0	77.4	76.6	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	78.0	77.2	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	66.1	65.3	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	67.4	67.4	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	60.1	60.1	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	47.5	47.5	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		99.6	77.0	104.1		85.8	110.0		97.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57			BN-3 / 56			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	100.4	74.2	70.0	105.3	79.1	80.0	107.5	85.0	
2	120.0	95.8	79.7	140.0	103.1	87.0	160.0	108.9	95.5	
3	180.0	89.8	78.9	210.0	98.4	87.5	240.0	105.5	96.9	
4	240.0	80.8	72.2	280.0	93.2	84.6	320.0	101.9	95.3	
5	300.0	75.6	69.0	350.0	88.7	82.1	400.0	99.3	94.5	
6	360.0	68.0	63.2	420.0	83.8	79.0	480.0	100.0	96.8	
7	420.0	61.5	56.7	490.0	81.1	77.9	560.0	97.1	93.9	
8	480.0	59.3	56.1	560.0	76.1	72.9	640.0	92.9	91.0	
9	540.0	50.0	46.8	630.0	67.9	66.0	720.0	87.9	87.1	
10	600.0	0.0	0.0	700.0	65.2	63.3	800.0	87.3	86.5	
11	660.0	0.0	0.0	770.0	58.9	58.1	880.0	85.4	84.6	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	81.0	81.0	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	77.0	77.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	73.7	73.7	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	71.8	72.4	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	69.6	70.2	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	64.5	65.1	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	58.6	59.6	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		102.0	83.5	108.1		92.5	113.3		104.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57			BN-3 / 56			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	102.4	76.2	70.0	107.2	81.0	80.0	110.6	88.1	
2	120.0	96.9	80.8	140.0	104.8	88.7	160.0	109.6	96.2	
3	180.0	90.1	79.2	210.0	98.0	87.1	240.0	107.9	99.3	
4	240.0	83.3	74.7	280.0	94.6	86.0	320.0	104.6	98.0	
5	300.0	72.8	66.2	350.0	90.5	83.9	400.0	104.6	99.8	
6	360.0	74.0	69.2	420.0	89.0	84.2	480.0	102.1	98.9	
7	420.0	66.5	61.7	490.0	82.3	79.1	560.0	96.9	93.7	
8	480.0	53.2	50.0	560.0	76.5	73.3	640.0	97.3	95.4	
9	540.0	0.0	0.0	630.0	75.0	73.1	720.0	94.6	93.8	
10	600.0	0.0	0.0	700.0	69.7	67.8	800.0	91.4	90.6	
11	660.0	0.0	0.0	770.0	64.5	63.7	880.0	88.1	87.3	
12	720.0	0.0	0.0	840.0	62.1	61.3	960.0	86.8	86.8	
13	780.0	0.0	0.0	910.0	55.2	55.2	1040.0	83.3	83.3	
14	840.0	0.0	0.0	980.0	51.8	51.8	1120.0	79.5	79.5	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	76.1	76.7	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	76.1	76.7	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	70.6	71.2	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	64.9	65.9	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	65.0	66.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	63.7	64.7	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	61.2	62.2	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	58.7	59.7	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	56.5	57.7	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		103.7	84.6	109.7		93.8	115.5		106.8	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57			BN-3 / 56			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	103.9	77.7	70.0	108.9	82.7	80.0	113.7	91.2	
2	120.0	97.9	81.8	140.0	105.6	89.5	160.0	109.7	96.3	
3	180.0	91.0	80.1	210.0	99.3	88.4	240.0	109.5	100.9	
4	240.0	84.7	76.1	280.0	97.8	89.2	320.0	106.8	100.2	
5	300.0	78.1	71.5	350.0	91.4	84.8	400.0	103.4	98.6	
6	360.0	71.7	66.9	420.0	88.2	83.4	480.0	101.9	98.7	
7	420.0	68.7	63.9	490.0	84.4	81.2	560.0	100.1	96.9	
8	480.0	59.8	56.6	560.0	79.6	76.4	640.0	98.2	96.3	
9	540.0	41.3	38.1	630.0	75.4	73.5	720.0	94.2	93.4	
10	600.0	0.0	0.0	700.0	70.6	68.7	800.0	92.9	92.1	
11	660.0	0.0	0.0	770.0	65.5	64.7	880.0	90.5	89.7	
12	720.0	0.0	0.0	840.0	61.3	60.5	960.0	85.2	85.2	
13	780.0	0.0	0.0	910.0	58.0	58.0	1040.0	84.5	84.5	
14	840.0	0.0	0.0	980.0	56.7	56.7	1120.0	82.3	82.3	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	78.5	79.1	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	74.4	75.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	74.3	74.9	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	70.7	71.7	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	66.1	67.1	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	62.9	63.9	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	60.7	61.7	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	59.8	60.8	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	54.8	56.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		105.1	85.7	111.2		95.2	117.2		107.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57			BN-3 / 56			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	105.1	78.9	70.0	110.8	84.6	80.0	116.5	94.0	
2	120.0	99.0	82.9	140.0	106.4	90.3	160.0	110.9	97.5	
3	180.0	91.1	80.2	210.0	97.8	86.9	240.0	108.3	99.7	
4	240.0	81.5	72.9	280.0	97.0	88.4	320.0	110.9	104.3	
5	300.0	82.0	75.4	350.0	95.7	89.1	400.0	106.3	101.5	
6	360.0	74.3	69.5	420.0	87.6	82.8	480.0	98.4	95.2	
7	420.0	59.3	54.5	490.0	80.5	77.3	560.0	99.9	96.7	
8	480.0	59.0	55.8	560.0	80.5	77.3	640.0	98.4	96.5	
9	540.0	55.9	52.7	630.0	76.2	74.3	720.0	94.3	93.5	
10	600.0	49.7	47.8	700.0	70.2	68.3	800.0	90.2	89.4	
11	660.0	0.0	0.0	770.0	64.3	63.5	880.0	87.4	86.6	
12	720.0	0.0	0.0	840.0	59.5	58.7	960.0	86.9	86.9	
13	780.0	0.0	0.0	910.0	57.3	57.3	1040.0	83.9	83.9	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	78.9	78.9	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	77.2	77.8	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	77.0	77.6	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	72.2	72.8	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	69.5	70.5	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	67.9	68.9	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	64.9	65.9	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	61.0	62.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	62.3	63.3	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	58.8	60.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		106.2	86.5	112.6		95.7	119.2		108.8	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57			BN-3 / 56			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	59.1	32.9	70.0	55.3	29.1	80.0	64.9	42.4	
2	120.0	50.9	34.8	140.0	0.0	0.0	160.0	54.6	41.2	
3	180.0	50.8	39.9	210.0	0.0	0.0	240.0	57.8	49.2	
4	240.0	44.9	36.3	280.0	0.0	0.0	320.0	0.0	0.0	
5	300.0	53.9	47.3	350.0	0.0	0.0	400.0	0.0	0.0	
6	360.0	41.6	36.8	420.0	0.0	0.0	480.0	0.0	0.0	
7	420.0	36.7	31.9	490.0	0.0	0.0	560.0	0.0	0.0	
8	480.0	0.0	0.0	560.0	0.0	0.0	640.0	0.0	0.0	
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	0.0	0.0	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	0.0	0.0	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		61.3	49.0	55.3		29.1	66.0		50.5	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57				BN-3 / 56		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	105.1	78.9	70.0	111.3	85.1	80.0	116.6	94.1	
2	120.0	93.1	77.0	140.0	100.2	84.1	160.0	107.4	94.0	
3	180.0	83.9	73.0	210.0	93.1	82.2	240.0	104.1	95.5	
4	240.0	73.8	65.2	280.0	75.0	66.4	320.0	94.4	87.8	
5	300.0	63.7	57.1	350.0	76.4	69.8	400.0	88.9	84.1	
6	360.0	61.4	56.6	420.0	65.4	60.6	480.0	79.4	76.2	
7	420.0	0.0	0.0	490.0	67.0	63.8	560.0	81.7	78.5	
8	480.0	0.0	0.0	560.0	62.2	59.0	640.0	73.5	71.6	
9	540.0	0.0	0.0	630.0	0.0	0.0	720.0	71.6	70.8	
10	600.0	0.0	0.0	700.0	0.0	0.0	800.0	70.8	70.0	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	70.4	69.6	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	45.4	45.4	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		105.4	81.8	111.7		88.8	117.3		99.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-1 / 58				BN-2 / 57			BN-3 / 56			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	105.4	79.2	70.0	108.7	82.5	80.0	113.5	91.0	
2	120.0	97.4	81.3	140.0	106.0	89.9	160.0	107.9	94.5	
3	180.0	89.6	78.7	210.0	95.5	84.6	240.0	106.6	98.0	
4	240.0	77.8	69.2	280.0	98.5	89.9	320.0	107.7	101.1	
5	300.0	79.9	73.3	350.0	93.4	86.8	400.0	102.8	98.0	
6	360.0	75.2	70.4	420.0	84.6	79.8	480.0	100.0	96.8	
7	420.0	66.1	61.3	490.0	81.5	78.3	560.0	100.3	97.1	
8	480.0	51.5	48.3	560.0	80.7	77.5	640.0	95.2	93.3	
9	540.0	0.0	0.0	630.0	74.7	72.8	720.0	91.7	90.9	
10	600.0	0.0	0.0	700.0	68.5	66.6	800.0	91.8	91.0	
11	660.0	0.0	0.0	770.0	0.0	0.0	880.0	88.5	87.7	
12	720.0	0.0	0.0	840.0	0.0	0.0	960.0	82.6	82.6	
13	780.0	0.0	0.0	910.0	0.0	0.0	1040.0	84.2	84.2	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	78.7	78.7	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	79.0	79.6	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	71.7	72.3	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	69.8	70.4	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	70.0	71.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	63.9	64.9	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	63.2	64.2	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		106.1	85.3	111.0		95.0	116.4		106.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54				BN-5 / 53		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	83.3	53.1	70.0	101.1	74.9	80.0	104.5	82.0	
2	97.6	74.6	55.5	140.0	92.3	76.2	160.0	102.9	89.5	
3	146.4	0.0	0.0	210.0	91.9	81.0	240.0	99.2	90.6	
4	195.2	0.0	0.0	280.0	86.4	77.8	320.0	96.2	89.6	
5	244.0	0.0	0.0	350.0	83.4	76.8	400.0	95.4	90.6	
6	292.8	0.0	0.0	420.0	77.3	72.5	480.0	87.4	84.2	
7	341.6	0.0	0.0	490.0	66.7	63.5	560.0	82.8	79.6	
8	390.4	0.0	0.0	560.0	0.0	0.0	640.0	80.2	78.3	
9	439.2	0.0	0.0	630.0	0.0	0.0	720.0	78.5	77.7	
10	488.0	0.0	0.0	700.0	0.0	0.0	800.0	77.1	76.3	
11	536.8	0.0	0.0	770.0	0.0	0.0	880.0	66.6	65.8	
12	585.6	0.0	0.0	840.0	0.0	0.0	960.0	58.2	58.2	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		83.8	57.5		102.3	85.1		108.1	96.8	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN									
BN-6 / 51				BN-61 / 52					
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	90.0	112.3	93.2	93.3	112.8	93.7			
2	180.0	107.9	97.0	186.6	120.8	109.9			
3	270.0	112.2	103.6	279.9	113.2	104.6			
4	360.0	112.9	108.1	373.2	115.1	110.3			
5	450.0	112.0	108.8	466.5	116.0	112.8			
6	540.0	112.1	108.9	559.8	113.7	110.5			
7	630.0	109.6	107.7	653.1	113.9	112.0			
8	720.0	106.9	106.1	746.4	111.0	110.2			
9	810.0	106.9	106.1	839.7	113.1	112.3			
10	900.0	107.2	107.2	933.0	111.8	111.8			
11	990.0	104.2	104.2	1026.3	109.4	109.4			
12	1080.0	101.4	101.4	1119.6	107.9	107.9			
13	1170.0	101.7	102.3	1212.9	107.7	108.3			
14	1260.0	100.1	100.7	1306.2	107.7	108.3			
15	1350.0	98.8	99.4	1399.5	103.9	104.5			
16	1440.0	96.1	97.1	1492.8	104.4	105.4			
17	1530.0	94.1	95.1	1586.1	103.3	104.3			
18	1620.0	93.5	94.5	1679.4	100.3	101.3			
19	1710.0	90.6	91.6	1772.7	99.4	100.4			
20	1800.0	87.1	88.3	1866.0	96.7	97.9			
21	1890.0	86.4	87.6	1959.3	98.8	100.0			
22	1980.0	87.9	89.1	2052.6	96.0	97.2			
23	2070.0	84.1	85.3	2145.9	93.9	95.1			
24	2160.0	81.0	82.2	2239.2	92.8	94.1			
25	2250.0	80.8	82.1	2332.5	92.6	93.9			
26	2340.0	80.5	81.8	2425.8	92.3	93.6			
27	2430.0	75.9	77.2	2519.1	88.8	90.1			
28	2520.0	74.2	75.5	2612.4	91.2	92.5			
29	2610.0	77.4	78.7	2705.7	90.5	91.8			
30	2700.0	75.4	76.7	2799.0	87.6	88.9			
31	2790.0	70.3	71.6	2892.3	85.1	86.3			
32	2880.0	0.0	0.0	2985.6	86.8	88.0			
33	2970.0	0.0	0.0	3078.9	87.8	89.0			
34	3060.0	0.0	0.0	3172.2	83.5	84.7			
35	3150.0	0.0	0.0	3265.5	81.5	82.7			
36	3240.0	0.0	0.0	3358.8	83.4	84.6			
37	3330.0	0.0	0.0	3452.1	81.9	83.1			
38	3420.0	0.0	0.0	3545.4	78.3	79.5			
39	3510.0	0.0	0.0	3638.7	77.5	78.5			
40	3600.0	0.0	0.0	3732.0	80.3	81.3			
OASPL		120.9	117.3		125.7	121.9			

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-6 / 51				BN-61 / 52						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	90.0	113.5	94.4	93.3	114.7	95.6				
2	180.0	112.2	101.3	186.6	113.1	102.2				
3	270.0	112.5	103.9	279.9	114.8	106.2				
4	360.0	113.3	108.5	373.2	117.4	112.6				
5	450.0	112.9	109.7	466.5	117.1	113.9				
6	540.0	110.5	107.3	559.8	114.2	111.0				
7	630.0	111.7	109.8	653.1	115.9	114.0				
8	720.0	111.1	110.3	746.4	116.4	115.6				
9	810.0	110.0	109.2	839.7	114.6	113.8				
10	900.0	109.2	109.2	933.0	114.0	114.0				
11	990.0	108.1	108.1	1026.3	113.3	113.3				
12	1080.0	105.8	105.8	1119.6	110.8	110.8				
13	1170.0	103.6	104.2	1212.9	111.4	112.0				
14	1260.0	104.7	105.3	1306.2	111.0	111.6				
15	1350.0	102.2	102.8	1399.5	108.0	108.6				
16	1440.0	100.2	101.2	1492.8	107.1	108.1				
17	1530.0	99.1	100.1	1586.1	107.5	108.5				
18	1620.0	99.6	100.6	1679.4	106.8	107.8				
19	1710.0	96.8	97.8	1772.7	102.8	103.8				
20	1800.0	93.1	94.3	1866.0	103.1	104.3				
21	1890.0	94.0	95.2	1959.3	103.5	104.7				
22	1980.0	92.8	94.0	2052.6	101.9	103.1				
23	2070.0	89.7	90.9	2145.9	99.6	100.8				
24	2160.0	88.7	89.9	2239.2	100.5	101.8				
25	2250.0	88.9	90.2	2332.5	98.5	99.8				
26	2340.0	85.3	86.6	2425.8	96.8	98.1				
27	2430.0	84.1	85.4	2519.1	97.1	98.4				
28	2520.0	83.8	85.1	2612.4	97.1	98.4				
29	2610.0	82.9	84.2	2705.7	95.2	96.5				
30	2700.0	80.3	81.6	2799.0	94.6	95.9				
31	2790.0	78.8	80.1	2892.3	95.3	96.5				
32	2880.0	80.6	81.8	2985.6	94.7	95.9				
33	2970.0	77.1	78.3	3078.9	93.0	94.2				
34	3060.0	78.0	79.2	3172.2	91.0	92.2				
35	3150.0	74.5	75.7	3265.5	91.7	92.9				
36	3240.0	73.1	74.3	3358.8	92.1	93.3				
37	3330.0	75.0	76.2	3452.1	90.2	91.4				
38	3420.0	72.5	73.7	3545.4	87.6	88.8				
39	3510.0	66.5	67.7	3638.7	88.7	89.7				
40	3600.0	0.0	0.0	3732.0	88.9	89.9				
OASPL		122.5	119.4		126.5	124.5				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	89.0	58.8	70.0	104.8	78.6	80.0	107.7	85.2	
2	97.6	79.4	60.3	140.0	100.9	84.8	160.0	108.1	94.7	
3	146.4	72.9	59.5	210.0	97.1	86.2	240.0	105.2	96.6	
4	195.2	0.0	0.0	280.0	92.1	83.5	320.0	101.2	94.6	
5	244.0	0.0	0.0	350.0	85.2	78.6	400.0	98.9	94.1	
6	292.8	0.0	0.0	420.0	82.1	77.3	480.0	99.1	95.9	
7	341.6	0.0	0.0	490.0	78.2	75.0	560.0	95.8	92.6	
8	390.4	0.0	0.0	560.0	73.3	70.1	640.0	91.8	89.9	
9	439.2	0.0	0.0	630.0	65.1	63.2	720.0	87.7	86.9	
10	488.0	0.0	0.0	700.0	60.5	58.6	800.0	86.9	86.1	
11	536.8	0.0	0.0	770.0	0.0	0.0	880.0	84.8	84.0	
12	585.6	0.0	0.0	840.0	0.0	0.0	960.0	80.2	80.2	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	75.8	75.8	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	74.8	74.8	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	71.0	71.6	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	68.4	69.0	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	61.8	62.4	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	60.2	61.2	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	53.0	54.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		89.5	64.4		107.0	90.8		112.8	103.3	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	87.7	57.5	70.0	106.4	80.2	80.0	111.0	88.5	
2	97.6	80.6	61.5	140.0	102.8	86.7	160.0	108.4	95.0	
3	146.4	73.6	60.2	210.0	97.1	86.2	240.0	106.9	98.3	
4	195.2	65.6	54.7	280.0	92.4	83.8	320.0	104.0	97.4	
5	244.0	0.0	0.0	350.0	89.7	83.1	400.0	103.8	99.0	
6	292.8	0.0	0.0	420.0	88.1	83.3	480.0	101.4	98.2	
7	341.6	0.0	0.0	490.0	83.0	79.8	560.0	96.4	93.2	
8	390.4	0.0	0.0	560.0	77.7	74.5	640.0	96.3	94.4	
9	439.2	0.0	0.0	630.0	76.2	74.3	720.0	93.9	93.1	
10	488.0	0.0	0.0	700.0	71.1	69.2	800.0	90.7	89.9	
11	536.8	0.0	0.0	770.0	67.6	66.8	880.0	87.3	86.5	
12	585.6	0.0	0.0	840.0	53.5	52.7	960.0	85.9	85.9	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	82.6	82.6	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	78.7	78.7	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	76.1	76.7	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	74.9	75.5	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	69.6	70.2	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	65.0	66.0	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	64.0	65.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	62.7	63.7	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	60.9	61.9	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	59.1	60.1	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		88.6	65.2	108.5		92.6	115.0		106.0	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	88.6	58.4	70.0	107.8	81.6	80.0	113.8	91.3	
2	97.6	79.4	60.3	140.0	103.7	87.6	160.0	108.3	94.9	
3	146.4	73.8	60.4	210.0	96.9	86.0	240.0	108.3	99.7	
4	195.2	62.0	51.1	280.0	96.1	87.5	320.0	105.1	98.5	
5	244.0	0.0	0.0	350.0	92.2	85.6	400.0	102.2	97.4	
6	292.8	0.0	0.0	420.0	87.8	83.0	480.0	100.7	97.5	
7	341.6	0.0	0.0	490.0	82.7	79.5	560.0	98.7	95.5	
8	390.4	0.0	0.0	560.0	77.7	74.5	640.0	97.3	95.4	
9	439.2	0.0	0.0	630.0	74.4	72.5	720.0	93.3	92.5	
10	488.0	0.0	0.0	700.0	70.2	68.3	800.0	91.5	90.7	
11	536.8	0.0	0.0	770.0	67.9	67.1	880.0	89.4	88.6	
12	585.6	0.0	0.0	840.0	66.1	65.3	960.0	84.8	84.8	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	83.6	83.6	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	81.8	81.8	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	77.4	78.0	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	73.6	74.2	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	72.3	72.9	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	69.8	70.8	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	65.0	66.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	59.7	60.7	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	61.0	62.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	56.2	57.2	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	56.7	57.9	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	48.5	49.7	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		89.2	64.8		109.8	93.8		116.6	106.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	89.3	59.1	70.0	109.1	82.9	80.0	116.0	93.5	
2	97.6	74.0	54.9	140.0	104.7	88.6	160.0	109.7	96.3	
3	146.4	0.0	0.0	210.0	95.8	84.9	240.0	107.0	98.4	
4	195.2	0.0	0.0	280.0	95.7	87.1	320.0	109.7	103.1	
5	244.0	0.0	0.0	350.0	92.1	85.5	400.0	105.0	100.2	
6	292.8	0.0	0.0	420.0	84.3	79.5	480.0	97.6	94.4	
7	341.6	0.0	0.0	490.0	77.2	74.0	560.0	98.8	95.6	
8	390.4	0.0	0.0	560.0	79.7	76.5	640.0	97.0	95.1	
9	439.2	0.0	0.0	630.0	76.4	74.5	720.0	93.1	92.3	
10	488.0	0.0	0.0	700.0	65.3	63.4	800.0	89.0	88.2	
11	536.8	0.0	0.0	770.0	0.0	0.0	880.0	87.1	86.3	
12	585.6	0.0	0.0	840.0	0.0	0.0	960.0	85.4	85.4	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	82.9	82.9	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	77.7	77.7	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	75.5	76.1	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	74.6	75.2	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	69.7	70.3	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	66.1	67.1	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	64.6	65.6	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	61.6	62.6	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		89.4	60.5	110.8		93.6	118.4		107.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	42.4	12.2	70.0	49.5	23.3	80.0	45.8	23.3	
2	97.6	18.4	-0.7	140.0	0.0	0.0	160.0	0.0	0.0	
3	146.4	0.0	0.0	210.0	0.0	0.0	240.0	0.0	0.0	
4	195.2	0.0	0.0	280.0	0.0	0.0	320.0	0.0	0.0	
5	244.0	0.0	0.0	350.0	0.0	0.0	400.0	0.0	0.0	
6	292.8	0.0	0.0	420.0	0.0	0.0	480.0	0.0	0.0	
7	341.6	0.0	0.0	490.0	0.0	0.0	560.0	0.0	0.0	
8	390.4	0.0	0.0	560.0	0.0	0.0	640.0	0.0	0.0	
9	439.2	0.0	0.0	630.0	0.0	0.0	720.0	0.0	0.0	
10	488.0	0.0	0.0	700.0	0.0	0.0	800.0	0.0	0.0	
11	536.8	0.0	0.0	770.0	0.0	0.0	880.0	0.0	0.0	
12	585.6	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		42.4	12.4		49.5	23.3		45.8	23.3	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	78.6	48.4	70.0	108.6	82.4	80.0	114.2	91.7	
2	97.6	0.0	0.0	140.0	97.7	81.6	160.0	104.8	91.4	
3	146.4	0.0	0.0	210.0	89.6	78.7	240.0	103.1	94.5	
4	195.2	0.0	0.0	280.0	75.9	67.3	320.0	92.7	86.1	
5	244.0	0.0	0.0	350.0	0.0	0.0	400.0	88.3	83.5	
6	292.8	0.0	0.0	420.0	0.0	0.0	480.0	83.1	79.9	
7	341.6	0.0	0.0	490.0	0.0	0.0	560.0	77.8	74.6	
8	390.4	0.0	0.0	560.0	0.0	0.0	640.0	70.5	68.6	
9	439.2	0.0	0.0	630.0	0.0	0.0	720.0	74.0	73.2	
10	488.0	0.0	0.0	700.0	0.0	0.0	800.0	72.5	71.7	
11	536.8	0.0	0.0	770.0	0.0	0.0	880.0	67.0	66.2	
12	585.6	0.0	0.0	840.0	0.0	0.0	960.0	0.0	0.0	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	0.0	0.0	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	0.0	0.0	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	0.0	0.0	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	0.0	0.0	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	0.0	0.0	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	0.0	0.0	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		78.6	48.4	109.0		86.0	115.0		98.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-7 / 55				BN-4 / 54			BN-5 / 53			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	48.8	97.5	67.3	70.0	105.7	79.5	80.0	112.9	90.4	
2	97.6	80.1	61.0	140.0	102.8	86.7	160.0	107.9	94.5	
3	146.4	68.6	55.2	210.0	93.4	82.5	240.0	105.7	97.1	
4	195.2	0.0	0.0	280.0	96.2	87.6	320.0	106.5	99.9	
5	244.0	0.0	0.0	350.0	93.0	86.4	400.0	101.5	96.7	
6	292.8	0.0	0.0	420.0	80.8	76.0	480.0	99.0	95.8	
7	341.6	0.0	0.0	490.0	76.7	73.5	560.0	99.2	96.0	
8	390.4	0.0	0.0	560.0	79.9	76.7	640.0	94.3	92.4	
9	439.2	0.0	0.0	630.0	69.0	67.1	720.0	91.2	90.4	
10	488.0	0.0	0.0	700.0	0.0	0.0	800.0	90.5	89.7	
11	536.8	0.0	0.0	770.0	0.0	0.0	880.0	86.4	85.6	
12	585.6	0.0	0.0	840.0	0.0	0.0	960.0	83.1	83.1	
13	634.4	0.0	0.0	910.0	0.0	0.0	1040.0	83.2	83.2	
14	683.2	0.0	0.0	980.0	0.0	0.0	1120.0	78.2	78.2	
15	732.0	0.0	0.0	1050.0	0.0	0.0	1200.0	77.0	77.6	
16	780.8	0.0	0.0	1120.0	0.0	0.0	1280.0	70.4	71.0	
17	829.6	0.0	0.0	1190.0	0.0	0.0	1360.0	68.4	69.0	
18	878.4	0.0	0.0	1260.0	0.0	0.0	1440.0	67.6	68.6	
19	927.2	0.0	0.0	1330.0	0.0	0.0	1520.0	0.0	0.0	
20	976.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1024.8	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1073.6	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1122.4	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1171.2	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1220.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1268.8	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1317.6	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1366.4	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1415.2	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1464.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1512.8	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1561.6	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1610.4	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	1659.2	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	1708.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	1756.8	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	1805.6	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	1854.4	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	1903.2	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	1952.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		97.6	68.4	108.1		92.7	115.7		105.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-6 / 51				BN-61 / 52						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	90.0	111.1	92.0	93.3	110.7	91.6				
2	180.0	107.9	97.0	186.6	111.2	100.3				
3	270.0	108.6	100.0	279.9	109.2	100.6				
4	360.0	106.7	101.9	373.2	110.4	105.6				
5	450.0	104.2	101.0	466.5	107.4	104.2				
6	540.0	99.7	96.5	559.8	103.4	100.2				
7	630.0	100.8	98.9	653.1	104.1	102.2				
8	720.0	100.6	99.8	746.4	104.0	103.2				
9	810.0	95.6	94.8	839.7	100.1	99.3				
10	900.0	95.3	95.3	933.0	99.6	99.6				
11	990.0	92.9	92.9	1026.3	97.0	97.0				
12	1080.0	84.7	84.7	1119.6	95.4	95.4				
13	1170.0	84.8	85.4	1212.9	91.0	91.6				
14	1260.0	82.4	83.0	1306.2	91.0	91.6				
15	1350.0	77.6	78.2	1399.5	88.3	88.9				
16	1440.0	77.5	78.5	1492.8	87.7	88.7				
17	1530.0	78.5	79.5	1586.1	84.5	85.5				
18	1620.0	74.5	75.5	1679.4	83.6	84.6				
19	1710.0	68.1	69.1	1772.7	82.2	83.2				
20	1800.0	0.0	0.0	1866.0	73.5	74.7				
21	1890.0	0.0	0.0	1959.3	76.9	78.1				
22	1980.0	0.0	0.0	2052.6	76.9	78.1				
23	2070.0	0.0	0.0	2145.9	63.8	65.0				
24	2160.0	0.0	0.0	2239.2	0.0	0.0				
25	2250.0	0.0	0.0	2332.5	0.0	0.0				
26	2340.0	0.0	0.0	2425.8	0.0	0.0				
27	2430.0	0.0	0.0	2519.1	0.0	0.0				
28	2520.0	0.0	0.0	2612.4	0.0	0.0				
29	2610.0	0.0	0.0	2705.7	0.0	0.0				
30	2700.0	0.0	0.0	2799.0	0.0	0.0				
31	2790.0	0.0	0.0	2892.3	0.0	0.0				
32	2880.0	0.0	0.0	2985.6	0.0	0.0				
33	2970.0	0.0	0.0	3078.9	0.0	0.0				
34	3060.0	0.0	0.0	3172.2	0.0	0.0				
35	3150.0	0.0	0.0	3265.5	0.0	0.0				
36	3240.0	0.0	0.0	3358.8	0.0	0.0				
37	3330.0	0.0	0.0	3452.1	0.0	0.0				
38	3420.0	0.0	0.0	3545.4	0.0	0.0				
39	3510.0	0.0	0.0	3638.7	0.0	0.0				
40	3600.0	0.0	0.0	3732.0	0.0	0.0				
OASPL		115.8	108.8		117.8	112.2				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-6 / 51				BN-61 / 52						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	90.0	114.3	95.2	93.3	116.1	97.0				
2	180.0	112.2	101.3	186.6	114.7	103.3				
3	270.0	114.6	106.0	279.9	118.2	109.6				
4	360.0	113.0	108.2	373.2	116.5	111.7				
5	450.0	112.6	109.4	466.5	117.1	113.9				
6	540.0	111.5	108.3	559.8	116.0	112.8				
7	630.0	112.4	110.5	653.1	115.9	114.0				
8	720.0	110.1	109.3	746.4	114.3	113.5				
9	810.0	109.5	108.7	839.7	114.3	113.5				
10	900.0	109.2	109.2	933.0	114.2	114.2				
11	990.0	107.5	107.5	1026.3	113.0	113.0				
12	1080.0	106.8	106.8	1119.6	113.6	113.6				
13	1170.0	106.2	106.8	1212.9	110.1	110.7				
14	1260.0	102.7	103.3	1306.2	110.1	110.7				
15	1350.0	103.4	104.0	1399.5	109.9	110.5				
16	1440.0	102.0	103.0	1492.8	108.4	109.4				
17	1530.0	99.1	100.1	1586.1	106.8	107.8				
18	1620.0	98.0	99.0	1679.4	105.9	106.9				
19	1710.0	97.9	98.9	1772.7	106.1	107.1				
20	1800.0	96.4	97.6	1866.0	103.4	104.6				
21	1890.0	92.9	94.1	1959.3	102.0	103.2				
22	1980.0	92.3	93.5	2052.6	101.6	102.8				
23	2070.0	90.9	92.1	2145.9	99.9	101.1				
24	2160.0	88.9	90.1	2239.2	98.6	99.9				
25	2250.0	88.4	89.7	2332.5	98.3	99.6				
26	2340.0	86.1	87.4	2425.8	97.6	98.9				
27	2430.0	85.8	87.1	2519.1	97.4	98.7				
28	2520.0	84.7	86.0	2612.4	97.6	98.9				
29	2610.0	84.3	85.6	2705.7	95.9	97.2				
30	2700.0	82.4	83.7	2799.0	95.5	96.8				
31	2790.0	80.4	81.7	2892.3	95.2	96.4				
32	2880.0	81.2	82.4	2985.6	93.2	94.4				
33	2970.0	77.1	78.3	3078.9	92.3	93.5				
34	3060.0	77.6	78.8	3172.2	93.3	94.5				
35	3150.0	76.8	78.0	3265.5	91.5	92.7				
36	3240.0	75.9	77.1	3358.8	90.5	91.7				
37	3330.0	72.1	73.3	3452.1	90.5	91.7				
38	3420.0	72.5	73.7	3545.4	89.8	91.0				
39	3510.0	72.8	74.0	3638.7	89.0	90.0				
40	3600.0	70.3	71.3	3732.0	86.6	87.6				
OASPL		122.9	119.5		127.0	124.5				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

MICROPHONE: HP 5 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-6 / 51				BN-61 / 52						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	90.0	115.6	96.5	93.3	117.7	98.6				
2	180.0	110.4	99.5	186.6	112.2	101.3				
3	270.0	114.0	105.4	279.9	116.8	108.2				
4	360.0	115.5	110.7	373.2	118.9	114.1				
5	450.0	108.3	105.1	466.5	111.9	108.7				
6	540.0	110.8	107.6	559.8	116.1	112.9				
7	630.0	112.4	110.5	653.1	115.9	114.0				
8	720.0	107.7	106.9	746.4	111.6	110.8				
9	810.0	108.2	107.4	839.7	112.6	111.8				
10	900.0	106.2	106.2	933.0	112.1	112.1				
11	990.0	106.8	106.8	1026.3	112.3	112.3				
12	1080.0	104.0	104.0	1119.6	107.1	107.1				
13	1170.0	103.6	104.2	1212.9	110.7	111.3				
14	1260.0	103.0	103.6	1306.2	108.8	109.4				
15	1350.0	100.5	101.1	1399.5	103.4	104.0				
16	1440.0	99.0	100.0	1492.8	107.0	108.0				
17	1530.0	97.7	98.7	1586.1	104.4	105.4				
18	1620.0	95.6	96.6	1679.4	101.0	102.0				
19	1710.0	94.0	95.0	1772.7	103.0	104.0				
20	1800.0	93.1	94.3	1866.0	100.2	101.4				
21	1890.0	90.6	91.8	1959.3	98.6	99.8				
22	1980.0	89.6	90.8	2052.6	99.6	100.8				
23	2070.0	89.6	90.8	2145.9	96.7	97.9				
24	2160.0	86.3	87.5	2239.2	94.7	96.0				
25	2250.0	85.3	86.6	2332.5	95.9	97.2				
26	2340.0	84.3	85.6	2425.8	92.6	93.9				
27	2430.0	82.1	83.4	2519.1	93.1	94.4				
28	2520.0	81.2	82.5	2612.4	89.7	91.0				
29	2610.0	77.8	79.1	2705.7	91.8	93.1				
30	2700.0	78.4	79.7	2799.0	89.9	91.2				
31	2790.0	76.8	78.1	2892.3	87.7	88.9				
32	2880.0	72.9	74.1	2985.6	90.3	91.5				
33	2970.0	74.6	75.8	3078.9	87.7	88.9				
34	3060.0	73.1	74.3	3172.2	86.6	87.8				
35	3150.0	70.1	71.3	3265.5	87.2	88.4				
36	3240.0	70.6	71.8	3358.8	85.1	86.3				
37	3330.0	71.2	72.4	3452.1	84.0	85.2				
38	3420.0	65.9	67.1	3545.4	84.0	85.2				
39	3510.0	66.6	67.8	3638.7	79.9	80.9				
40	3600.0	0.0	0.0	3732.0	82.7	83.7				
OASPL		122.4	118.3		126.1	122.9				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-6 / 51				BN-61 / 52						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	90.0	41.3	22.2	93.3	41.5	22.4				
2	180.0	0.0	0.0	186.6	0.0	0.0				
3	270.0	0.0	0.0	279.9	0.0	0.0				
4	360.0	0.0	0.0	373.2	0.0	0.0				
5	450.0	0.0	0.0	466.5	0.0	0.0				
6	540.0	0.0	0.0	559.8	0.0	0.0				
7	630.0	0.0	0.0	653.1	0.0	0.0				
8	720.0	0.0	0.0	746.4	0.0	0.0				
9	810.0	0.0	0.0	839.7	0.0	0.0				
10	900.0	0.0	0.0	933.0	0.0	0.0				
11	990.0	0.0	0.0	1026.3	0.0	0.0				
12	1080.0	0.0	0.0	1119.6	0.0	0.0				
13	1170.0	0.0	0.0	1212.9	0.0	0.0				
14	1260.0	0.0	0.0	1306.2	0.0	0.0				
15	1350.0	0.0	0.0	1399.5	0.0	0.0				
16	1440.0	0.0	0.0	1492.8	0.0	0.0				
17	1530.0	0.0	0.0	1586.1	0.0	0.0				
18	1620.0	0.0	0.0	1679.4	0.0	0.0				
19	1710.0	0.0	0.0	1772.7	0.0	0.0				
20	1800.0	0.0	0.0	1866.0	0.0	0.0				
21	1890.0	0.0	0.0	1959.3	0.0	0.0				
22	1980.0	0.0	0.0	2052.6	0.0	0.0				
23	2070.0	0.0	0.0	2145.9	0.0	0.0				
24	2160.0	0.0	0.0	2239.2	0.0	0.0				
25	2250.0	0.0	0.0	2332.5	0.0	0.0				
26	2340.0	0.0	0.0	2425.8	0.0	0.0				
27	2430.0	0.0	0.0	2519.1	0.0	0.0				
28	2520.0	0.0	0.0	2612.4	0.0	0.0				
29	2610.0	0.0	0.0	2705.7	0.0	0.0				
30	2700.0	0.0	0.0	2799.0	0.0	0.0				
31	2790.0	0.0	0.0	2892.3	0.0	0.0				
32	2880.0	0.0	0.0	2985.6	0.0	0.0				
33	2970.0	0.0	0.0	3078.9	0.0	0.0				
34	3060.0	0.0	0.0	3172.2	0.0	0.0				
35	3150.0	0.0	0.0	3265.5	0.0	0.0				
36	3240.0	0.0	0.0	3358.8	0.0	0.0				
37	3330.0	0.0	0.0	3452.1	0.0	0.0				
38	3420.0	0.0	0.0	3545.4	0.0	0.0				
39	3510.0	0.0	0.0	3638.7	0.0	0.0				
40	3600.0	0.0	0.0	3732.0	0.0	0.0				
OASPL		41.3	22.2		41.5	22.4				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-6 / 51				BN-61 / 52						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	90.0	112.1	93.0	93.3	113.4	94.3				
2	180.0	108.2	97.3	186.6	108.2	97.3				
3	270.0	115.4	106.8	279.9	118.4	109.8				
4	360.0	112.8	108.0	373.2	113.4	108.6				
5	450.0	110.9	107.7	466.5	115.0	111.8				
6	540.0	112.5	109.3	559.8	115.9	112.7				
7	630.0	110.0	108.1	653.1	113.1	111.2				
8	720.0	108.9	108.1	746.4	114.4	113.6				
9	810.0	110.1	109.3	839.7	113.7	112.9				
10	900.0	106.5	106.5	933.0	110.2	110.2				
11	990.0	105.4	105.4	1026.3	113.7	113.7				
12	1080.0	106.2	106.2	1119.6	111.9	111.9				
13	1170.0	105.2	105.8	1212.9	109.8	110.4				
14	1260.0	100.6	101.2	1306.2	109.5	110.1				
15	1350.0	102.7	103.3	1399.5	109.1	109.7				
16	1440.0	100.7	101.7	1492.8	106.0	107.0				
17	1530.0	97.5	98.5	1586.1	106.8	107.8				
18	1620.0	97.6	98.6	1679.4	105.1	106.1				
19	1710.0	95.5	96.5	1772.7	103.9	104.5				
20	1800.0	94.2	95.4	1866.0	103.9	105.1				
21	1890.0	94.1	95.3	1959.3	100.7	101.9				
22	1980.0	89.6	90.8	2052.6	100.5	101.7				
23	2070.0	90.5	91.7	2145.9	102.1	103.3				
24	2160.0	90.3	91.5	2239.2	94.5	95.8				
25	2250.0	80.9	82.2	2332.5	99.8	101.1				
26	2340.0	86.6	87.9	2425.8	97.4	98.7				
27	2430.0	84.3	85.6	2519.1	95.6	96.9				
28	2520.0	81.2	82.5	2612.4	96.7	98.0				
29	2610.0	82.8	84.1	2705.7	93.7	95.0				
30	2700.0	80.2	81.5	2799.0	94.9	96.2				
31	2790.0	79.4	80.7	2892.3	95.1	96.3				
32	2880.0	79.7	80.9	2985.6	91.9	93.1				
33	2970.0	76.2	77.4	3078.9	93.1	94.3				
34	3060.0	76.8	78.0	3172.2	93.5	94.7				
35	3150.0	76.2	77.4	3265.5	91.3	92.5				
36	3240.0	76.4	77.6	3358.8	89.8	91.0				
37	3330.0	70.3	71.5	3452.1	93.2	94.4				
38	3420.0	0.0	0.0	3545.4	88.3	89.5				
39	3510.0	0.0	0.0	3638.7	88.6	89.6				
40	3600.0	0.0	0.0	3732.0	90.4	91.4				
OASPL		121.9	118.5		125.6	123.4				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-1 / 104				CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	102.3	76.1	70.0	103.6	77.4				
2	120.0	90.4	74.3	140.0	91.9	75.8				
3	180.0	81.0	70.1	210.0	94.1	83.2				
4	240.0	77.4	68.8	280.0	88.5	79.9				
5	300.0	70.0	63.4	350.0	83.9	77.3				
6	360.0	62.3	57.5	420.0	76.6	71.8				
7	420.0	0.0	0.0	490.0	71.9	68.7				
8	480.0	0.0	0.0	560.0	68.1	64.9				
9	540.0	0.0	0.0	630.0	59.8	57.9				
10	600.0	0.0	0.0	700.0	0.0	0.0				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		102.6	79.4		104.5	86.8				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-1 / 104				CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	104.0	77.8	70.0	108.4	82.2				
2	120.0	98.0	81.9	140.0	104.0	87.9				
3	180.0	92.8	81.9	210.0	98.9	88.0				
4	240.0	83.2	74.6	280.0	95.3	86.7				
5	300.0	72.4	65.8	350.0	88.6	82.0				
6	360.0	68.1	63.3	420.0	84.0	79.2				
7	420.0	67.2	62.4	490.0	79.8	76.6				
8	480.0	62.7	59.5	560.0	76.0	72.8				
9	540.0	60.8	57.6	630.0	70.9	69.0				
10	600.0	65.1	63.2	700.0	65.3	63.4				
11	660.0	56.6	54.7	770.0	65.3	64.5				
12	720.0	46.1	45.3	840.0	62.1	61.3				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		105.3	86.1		110.2	93.4				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN									
CN-1 / 104			CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	60.0	105.8	79.6	70.0	110.8	84.6			
2	120.0	99.4	83.3	140.0	106.4	90.3			
3	180.0	92.8	81.9	210.0	101.2	90.3			
4	240.0	85.6	77.0	280.0	96.4	87.8			
5	300.0	80.4	73.8	350.0	92.1	85.5			
6	360.0	77.3	72.5	420.0	90.3	85.5			
7	420.0	70.8	66.0	490.0	85.3	82.1			
8	480.0	58.6	55.4	560.0	80.0	76.8			
9	540.0	58.7	55.5	630.0	75.8	73.9			
10	600.0	62.7	60.8	700.0	69.9	68.0			
11	660.0	55.7	53.8	770.0	66.9	66.1			
12	720.0	0.0	0.0	840.0	65.7	64.9			
13	780.0	0.0	0.0	910.0	63.0	63.0			
14	840.0	0.0	0.0	980.0	58.9	58.9			
15	900.0	0.0	0.0	1050.0	55.5	55.5			
16	960.0	0.0	0.0	1120.0	0.0	0.0			
17	1020.0	0.0	0.0	1190.0	0.0	0.0			
18	1080.0	0.0	0.0	1260.0	0.0	0.0			
19	1140.0	0.0	0.0	1330.0	0.0	0.0			
20	1200.0	0.0	0.0	1400.0	0.0	0.0			
21	1260.0	0.0	0.0	1470.0	0.0	0.0			
22	1320.0	0.0	0.0	1540.0	0.0	0.0			
23	1380.0	0.0	0.0	1610.0	0.0	0.0			
24	1440.0	0.0	0.0	1680.0	0.0	0.0			
25	1500.0	0.0	0.0	1750.0	0.0	0.0			
26	1560.0	0.0	0.0	1820.0	0.0	0.0			
27	1620.0	0.0	0.0	1890.0	0.0	0.0			
28	1680.0	0.0	0.0	1960.0	0.0	0.0			
29	1740.0	0.0	0.0	2030.0	0.0	0.0			
30	1800.0	0.0	0.0	2100.0	0.0	0.0			
31	1860.0	0.0	0.0	2170.0	0.0	0.0			
32	1920.0	0.0	0.0	2240.0	0.0	0.0			
33	1980.0	0.0	0.0	2310.0	0.0	0.0			
34	2040.0	0.0	0.0	2380.0	0.0	0.0			
35	2100.0	0.0	0.0	2450.0	0.0	0.0			
36	2160.0	0.0	0.0	2520.0	0.0	0.0			
37	2220.0	0.0	0.0	2590.0	0.0	0.0			
38	2280.0	0.0	0.0	2660.0	0.0	0.0			
39	2340.0	0.0	0.0	2730.0	0.0	0.0			
40	2400.0	0.0	0.0	2800.0	0.0	0.0			
OASPL		106.9	87.5		112.7	96.0			

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-1 / 104				CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	107.2	81.0	70.0	112.7	86.5				
2	120.0	100.4	84.3	140.0	107.8	91.7				
3	180.0	93.2	82.3	210.0	101.6	90.7				
4	240.0	87.2	78.6	280.0	100.3	91.7				
5	300.0	82.3	75.7	350.0	94.6	88.0				
6	360.0	74.3	69.5	420.0	90.3	85.5				
7	420.0	62.3	57.5	490.0	83.9	80.7				
8	480.0	65.6	62.4	560.0	80.7	77.5				
9	540.0	65.2	62.0	630.0	78.6	76.7				
10	600.0	58.1	56.2	700.0	72.5	70.6				
11	660.0	0.0	0.0	770.0	65.6	64.8				
12	720.0	0.0	0.0	840.0	58.9	58.1				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		108.2	88.4		114.4	97.6				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN									
CN-1 / 104				CN-2 / 103					
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	60.0	108.0	81.8	70.0	113.8	87.6			
2	120.0	101.6	85.5	140.0	108.7	92.6			
3	180.0	93.0	82.1	210.0	99.7	88.8			
4	240.0	83.8	75.2	280.0	99.2	90.6			
5	300.0	79.0	72.4	350.0	96.0	89.4			
6	360.0	75.1	70.3	420.0	88.5	83.7			
7	420.0	73.3	68.5	490.0	83.1	79.9			
8	480.0	66.7	63.5	560.0	82.6	79.4			
9	540.0	54.4	51.2	630.0	76.2	74.3			
10	600.0	0.0	0.0	700.0	72.5	70.6			
11	660.0	0.0	0.0	770.0	69.5	68.7			
12	720.0	0.0	0.0	840.0	65.0	64.2			
13	780.0	0.0	0.0	910.0	53.4	53.4			
14	840.0	0.0	0.0	980.0	0.0	0.0			
15	900.0	0.0	0.0	1050.0	0.0	0.0			
16	960.0	0.0	0.0	1120.0	0.0	0.0			
17	1020.0	0.0	0.0	1190.0	0.0	0.0			
18	1080.0	0.0	0.0	1260.0	0.0	0.0			
19	1140.0	0.0	0.0	1330.0	0.0	0.0			
20	1200.0	0.0	0.0	1400.0	0.0	0.0			
21	1260.0	0.0	0.0	1470.0	0.0	0.0			
22	1320.0	0.0	0.0	1540.0	0.0	0.0			
23	1380.0	0.0	0.0	1610.0	0.0	0.0			
24	1440.0	0.0	0.0	1680.0	0.0	0.0			
25	1500.0	0.0	0.0	1750.0	0.0	0.0			
26	1560.0	0.0	0.0	1820.0	0.0	0.0			
27	1620.0	0.0	0.0	1890.0	0.0	0.0			
28	1680.0	0.0	0.0	1960.0	0.0	0.0			
29	1740.0	0.0	0.0	2030.0	0.0	0.0			
30	1800.0	0.0	0.0	2100.0	0.0	0.0			
31	1860.0	0.0	0.0	2170.0	0.0	0.0			
32	1920.0	0.0	0.0	2240.0	0.0	0.0			
33	1980.0	0.0	0.0	2310.0	0.0	0.0			
34	2040.0	0.0	0.0	2380.0	0.0	0.0			
35	2100.0	0.0	0.0	2450.0	0.0	0.0			
36	2160.0	0.0	0.0	2520.0	0.0	0.0			
37	2220.0	0.0	0.0	2590.0	0.0	0.0			
38	2280.0	0.0	0.0	2660.0	0.0	0.0			
39	2340.0	0.0	0.0	2730.0	0.0	0.0			
40	2400.0	0.0	0.0	2800.0	0.0	0.0			
OASPL		109.0	88.7		115.3	97.5			

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-1 / 104				CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	106.6	80.4	70.0	113.8	87.6				
2	120.0	100.3	84.2	140.0	107.1	91.0				
3	180.0	90.8	79.9	210.0	98.3	87.4				
4	240.0	81.3	72.7	280.0	97.5	88.9				
5	300.0	81.2	74.6	350.0	93.1	86.5				
6	360.0	72.4	67.6	420.0	79.6	74.8				
7	420.0	65.3	60.5	490.0	73.6	70.4				
8	480.0	65.8	62.6	560.0	80.0	76.8				
9	540.0	61.1	57.9	630.0	63.5	61.6				
10	600.0	60.5	58.6	700.0	68.0	66.1				
11	660.0	58.0	56.1	770.0	66.4	65.6				
12	720.0	57.1	56.3	840.0	59.2	58.4				
13	780.0	55.5	54.7	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		107.6	87.3		114.9	95.7				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-1 / 104				CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	104.5	78.3	70.0	111.1	84.0				
2	120.0	93.8	77.7	140.0	101.2	85.1				
3	180.0	81.1	70.2	210.0	91.6	80.7				
4	240.0	73.7	65.1	280.0	76.7	68.1				
5	300.0	72.2	65.6	350.0	0.0	0.0				
6	360.0	68.8	64.0	420.0	0.0	0.0				
7	420.0	66.3	61.5	490.0	0.0	0.0				
8	480.0	66.7	63.5	560.0	0.0	0.0				
9	540.0	59.9	56.7	630.0	0.0	0.0				
10	600.0	0.0	0.0	700.0	0.0	0.0				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		104.9	81.8		111.6	88.8				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-1 / 104				CN-2 / 103						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	107.2	81.0	70.0	109.6	83.4				
2	120.0	99.9	83.8	140.0	105.5	89.4				
3	180.0	92.4	81.5	210.0	96.6	85.7				
4	240.0	81.4	72.8	280.0	100.7	92.1				
5	300.0	79.9	73.3	350.0	93.2	86.6				
6	360.0	78.1	73.3	420.0	85.7	80.9				
7	420.0	60.0	55.2	490.0	80.8	77.6				
8	480.0	0.0	0.0	560.0	82.0	78.8				
9	540.0	0.0	0.0	630.0	75.3	73.4				
10	600.0	0.0	0.0	700.0	68.6	66.7				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		108.1	87.6			111.6	95.8			

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN											
CN-3 / 101				CN-4 / 100				CN-7 / 99			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	99.5	73.3	70.0	104.6	78.4	75.0	107.5	85.0		
2	120.0	88.7	72.6	140.0	92.7	76.6	150.0	102.3	88.9		
3	180.0	74.9	64.0	210.0	93.6	82.7	225.0	95.0	86.4		
4	240.0	79.8	71.2	280.0	87.9	79.3	300.0	96.4	89.8		
5	300.0	70.0	63.4	350.0	82.7	76.1	375.0	87.3	82.5		
6	360.0	70.3	65.5	420.0	71.0	66.2	450.0	77.4	74.2		
7	420.0	67.4	62.6	490.0	62.8	59.6	525.0	75.6	72.4		
8	480.0	56.8	53.6	560.0	0.0	0.0	600.0	70.6	68.7		
9	540.0	0.0	0.0	630.0	0.0	0.0	675.0	65.2	63.3		
10	600.0	0.0	0.0	700.0	0.0	0.0	750.0	68.0	67.2		
11	660.0	0.0	0.0	770.0	0.0	0.0	825.0	64.8	64.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	900.0	56.0	56.0		
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	0.0	0.0		
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	0.0	0.0		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	0.0	0.0		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	0.0	0.0		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	0.0	0.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	0.0	0.0		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0		
OASPL		99.9	78.0			105.3	86.4			109.1	94.4

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-3 / 101				CN-4 / 100				CN-7 / 99		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	100.2	74.0	70.0	107.7	81.5	75.0	112.7	90.2	
2	120.0	95.4	79.3	140.0	104.1	88.0	150.0	108.2	94.8	
3	180.0	92.8	81.9	210.0	98.5	87.6	225.0	101.5	92.9	
4	240.0	78.8	70.2	280.0	95.3	86.7	300.0	98.6	92.0	
5	300.0	78.8	72.2	350.0	89.7	83.1	375.0	97.3	92.5	
6	360.0	72.3	67.5	420.0	86.5	81.7	450.0	93.6	90.4	
7	420.0	66.6	61.8	490.0	81.8	78.6	525.0	91.8	88.6	
8	480.0	0.0	0.0	560.0	75.7	72.5	600.0	85.6	83.7	
9	540.0	0.0	0.0	630.0	72.6	70.7	675.0	81.0	79.1	
10	600.0	0.0	0.0	700.0	67.5	65.6	750.0	76.2	75.4	
11	660.0	0.0	0.0	770.0	63.9	63.1	825.0	77.4	76.6	
12	720.0	0.0	0.0	840.0	0.0	0.0	900.0	73.6	73.6	
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	66.1	66.1	
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	58.7	58.7	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	58.4	59.0	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	59.5	60.1	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0	
OASPL		102.1	84.8		109.8	93.6		114.5	100.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN											
CN-3 / 101				CN-4 / 100			CN-7 / 99				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	103.5	77.3	70.0	109.3	83.1	75.0	114.0	91.5		
2	120.0	97.3	81.2	140.0	105.6	89.5	150.0	109.9	96.5		
3	180.0	91.3	80.4	210.0	100.8	89.9	225.0	105.8	97.2		
4	240.0	83.4	74.8	280.0	96.3	87.7	300.0	101.3	94.7		
5	300.0	70.9	64.3	350.0	92.5	85.9	375.0	101.7	96.9		
6	360.0	80.5	75.7	420.0	90.0	85.2	450.0	97.1	93.9		
7	420.0	70.0	65.2	490.0	84.0	80.8	525.0	91.6	88.4		
8	480.0	56.6	53.4	560.0	78.7	75.5	600.0	89.6	87.7		
9	540.0	0.0	0.0	630.0	75.2	73.3	675.0	87.4	85.5		
10	600.0	0.0	0.0	700.0	73.0	71.1	750.0	84.0	83.2		
11	660.0	0.0	0.0	770.0	67.0	66.2	825.0	79.8	79.0		
12	720.0	0.0	0.0	840.0	0.0	0.0	900.0	77.7	77.7		
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	74.3	74.3		
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	69.7	69.7		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	62.1	62.7		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	59.8	60.4		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	61.2	61.8		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	54.8	55.4		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0		
OASPL		104.7	85.7			111.5	95.5			116.3	103.7

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-3 / 101			CN-4 / 100			CN-7 / 99				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	105.2	79.0	70.0	112.1	85.9	75.0	115.5	93.0	
2	120.0	98.5	82.4	140.0	108.3	92.2	150.0	111.9	98.5	
3	180.0	89.6	78.7	210.0	99.6	88.7	225.0	105.7	97.1	
4	240.0	83.5	74.9	280.0	98.8	90.2	300.0	106.3	99.7	
5	300.0	82.0	75.4	350.0	96.5	89.9	375.0	104.6	99.8	
6	360.0	79.2	74.4	420.0	89.8	85.0	450.0	93.2	90.0	
7	420.0	67.1	62.3	490.0	82.8	79.6	525.0	91.4	88.2	
8	480.0	0.0	0.0	560.0	81.8	78.6	600.0	92.0	90.1	
9	540.0	0.0	0.0	630.0	76.5	74.6	675.0	87.7	85.8	
10	600.0	0.0	0.0	700.0	73.5	71.6	750.0	82.2	81.4	
11	660.0	0.0	0.0	770.0	66.4	65.6	825.0	79.9	79.1	
12	720.0	0.0	0.0	840.0	61.3	60.5	900.0	74.2	74.2	
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	73.0	73.0	
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	71.4	71.4	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	63.5	64.1	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	0.0	0.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0	
OASPL		106.2	86.2			114.0	97.3			118.0 105.6

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN											
CN-3 / 101				CN-4 / 100			CN-7 / 99				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	105.0	78.8	70.0	110.9	84.7	75.0	114.7	92.2		
2	120.0	98.0	81.9	140.0	106.6	90.5	150.0	110.6	97.2		
3	180.0	91.3	80.4	210.0	101.1	90.2	225.0	107.4	98.8		
4	240.0	87.3	78.7	280.0	99.7	91.1	300.0	104.4	97.8		
5	300.0	77.4	70.8	350.0	93.4	86.8	375.0	101.2	96.4		
6	360.0	74.3	69.5	420.0	89.7	84.9	450.0	97.7	94.5		
7	420.0	74.4	69.6	490.0	85.8	82.6	525.0	94.2	91.0		
8	480.0	59.3	56.1	560.0	82.0	78.8	600.0	91.9	90.0		
9	540.0	0.0	0.0	630.0	78.9	77.0	675.0	87.8	85.9		
10	600.0	0.0	0.0	700.0	71.2	69.3	750.0	84.8	84.0		
11	660.0	0.0	0.0	770.0	67.5	66.7	825.0	79.5	78.7		
12	720.0	0.0	0.0	840.0	62.1	61.3	900.0	76.8	76.8		
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	75.2	75.2		
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	70.8	70.8		
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	67.9	68.5		
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	63.0	63.6		
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	60.4	61.0		
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	58.8	59.4		
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	38.2	39.2		
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0		
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0		
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0		
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0		
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0		
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0		
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0		
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0		
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0		
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0		
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0		
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0		
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0		
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0		
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0		
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0		
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0		
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0		
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0		
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0		
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0		
OASPL		106.0	86.5			112.9	96.9			117.1	104.9

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 23.7 DEG )

DATA-PCINT / RUN										
CN-3 / 101				CN-4 / 100				CN-7 / 99		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	106.3	80.1	70.0	108.6	82.4	75.0	113.4	90.9	
2	120.0	98.2	82.1	140.0	105.2	89.1	150.0	108.7	95.3	
3	180.0	91.5	80.6	210.0	96.0	85.1	225.0	101.4	92.8	
4	240.0	76.6	68.0	280.0	100.2	91.6	300.0	104.9	98.3	
5	300.0	78.9	72.3	350.0	93.3	86.7	375.0	101.9	97.1	
6	360.0	68.1	63.3	420.0	84.6	79.8	450.0	94.7	91.5	
7	420.0	0.0	0.0	490.0	84.1	80.9	525.0	92.5	89.3	
8	480.0	0.0	0.0	560.0	81.1	77.9	600.0	90.4	88.5	
9	540.0	0.0	0.0	630.0	75.5	73.6	675.0	86.1	84.2	
10	600.0	0.0	0.0	700.0	70.6	68.7	750.0	83.1	82.3	
11	660.0	0.0	0.0	770.0	0.0	0.0	825.0	81.1	80.3	
12	720.0	0.0	0.0	840.0	0.0	0.0	900.0	77.6	77.6	
13	780.0	0.0	0.0	910.0	0.0	0.0	975.0	75.5	75.5	
14	840.0	0.0	0.0	980.0	0.0	0.0	1050.0	68.6	68.6	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1125.0	67.6	68.2	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1200.0	63.4	64.0	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1275.0	0.0	0.0	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1350.0	0.0	0.0	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1425.0	0.0	0.0	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1500.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1575.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1650.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1725.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1800.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	1875.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	1950.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2025.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2100.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2175.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2250.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2325.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2400.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2475.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2550.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2625.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2700.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2775.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	2850.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	2925.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3000.0	0.0	0.0	
OASPL		107.0	86.1		110.9	95.5		115.5	103.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-5 / 98			CN-6 / 102							
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	80.0	107.6	85.1	43.1	81.8	47.2				
2	160.0	104.8	91.4	86.2	67.6	45.1				
3	240.0	101.7	93.1	129.3	67.5	51.4				
4	320.0	97.8	91.2	172.4	0.0	0.0				
5	400.0	95.5	90.7	215.5	0.0	0.0				
6	480.0	90.6	87.4	258.6	0.0	0.0				
7	560.0	85.1	81.9	301.7	0.0	0.0				
8	640.0	82.2	80.3	344.8	0.0	0.0				
9	720.0	76.8	76.0	387.9	0.0	0.0				
10	800.0	76.8	76.0	431.0	0.0	0.0				
11	880.0	72.2	71.4	474.1	0.0	0.0				
12	960.0	56.7	56.7	517.2	0.0	0.0				
13	1040.0	0.0	0.0	560.3	0.0	0.0				
14	1120.0	0.0	0.0	603.4	0.0	0.0				
15	1200.0	0.0	0.0	646.5	0.0	0.0				
16	1280.0	0.0	0.0	689.6	0.0	0.0				
17	1360.0	0.0	0.0	732.7	0.0	0.0				
18	1440.0	0.0	0.0	775.8	0.0	0.0				
19	1520.0	0.0	0.0	818.9	0.0	0.0				
20	1600.0	0.0	0.0	862.0	0.0	0.0				
21	1680.0	0.0	0.0	905.1	0.0	0.0				
22	1760.0	0.0	0.0	948.2	0.0	0.0				
23	1840.0	0.0	0.0	991.3	0.0	0.0				
24	1920.0	0.0	0.0	1034.4	0.0	0.0				
25	2000.0	0.0	0.0	1077.5	0.0	0.0				
26	2080.0	0.0	0.0	1120.6	0.0	0.0				
27	2160.0	0.0	0.0	1163.7	0.0	0.0				
28	2240.0	0.0	0.0	1206.8	0.0	0.0				
29	2320.0	0.0	0.0	1249.9	0.0	0.0				
30	2400.0	0.0	0.0	1293.0	0.0	0.0				
31	2480.0	0.0	0.0	1336.1	0.0	0.0				
32	2560.0	0.0	0.0	1379.2	0.0	0.0				
33	2640.0	0.0	0.0	1422.3	0.0	0.0				
34	2720.0	0.0	0.0	1465.4	0.0	0.0				
35	2800.0	0.0	0.0	1508.5	0.0	0.0				
36	2880.0	0.0	0.0	1551.6	0.0	0.0				
37	2960.0	0.0	0.0	1594.7	0.0	0.0				
38	3040.0	0.0	0.0	1637.8	0.0	0.0				
39	3120.0	0.0	0.0	1680.9	0.0	0.0				
40	3200.0	0.0	0.0	1724.0	0.0	0.0				
OASPL		110.5	98.5		82.1	53.5				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-5 / 98				CN-6 / 102						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	80.0	108.6	86.1	43.1	83.8	49.2				
2	160.0	109.2	95.8	86.2	0.0	0.0				
3	240.0	106.0	97.4	129.3	0.0	0.0				
4	320.0	102.8	96.2	172.4	0.0	0.0				
5	400.0	101.1	96.3	215.5	0.0	0.0				
6	480.0	100.7	97.5	258.6	0.0	0.0				
7	560.0	97.5	94.3	301.7	0.0	0.0				
8	640.0	94.3	92.4	344.8	0.0	0.0				
9	720.0	88.0	87.2	387.9	0.0	0.0				
10	800.0	88.9	88.1	431.0	0.0	0.0				
11	880.0	86.7	85.9	474.1	0.0	0.0				
12	960.0	82.1	82.1	517.2	0.0	0.0				
13	1040.0	78.2	78.2	560.3	0.0	0.0				
14	1120.0	76.5	76.5	603.4	0.0	0.0				
15	1200.0	71.7	72.3	646.5	0.0	0.0				
16	1280.0	72.0	72.6	689.6	0.0	0.0				
17	1360.0	65.7	66.3	732.7	0.0	0.0				
18	1440.0	63.1	64.1	775.8	0.0	0.0				
19	1520.0	0.0	0.0	818.9	0.0	0.0				
20	1600.0	0.0	0.0	862.0	0.0	0.0				
21	1680.0	0.0	0.0	905.1	0.0	0.0				
22	1760.0	0.0	0.0	948.2	0.0	0.0				
23	1840.0	0.0	0.0	991.3	0.0	0.0				
24	1920.0	0.0	0.0	1034.4	0.0	0.0				
25	2000.0	0.0	0.0	1077.5	0.0	0.0				
26	2080.0	0.0	0.0	1120.6	0.0	0.0				
27	2160.0	0.0	0.0	1163.7	0.0	0.0				
28	2240.0	0.0	0.0	1206.8	0.0	0.0				
29	2320.0	0.0	0.0	1249.9	0.0	0.0				
30	2400.0	0.0	0.0	1293.0	0.0	0.0				
31	2480.0	0.0	0.0	1336.1	0.0	0.0				
32	2560.0	0.0	0.0	1379.2	0.0	0.0				
33	2640.0	0.0	0.0	1422.3	0.0	0.0				
34	2720.0	0.0	0.0	1465.4	0.0	0.0				
35	2800.0	0.0	0.0	1508.5	0.0	0.0				
36	2880.0	0.0	0.0	1551.6	0.0	0.0				
37	2960.0	0.0	0.0	1594.7	0.0	0.0				
38	3040.0	0.0	0.0	1637.8	0.0	0.0				
39	3120.0	0.0	0.0	1680.9	0.0	0.0				
40	3200.0	0.0	0.0	1724.0	0.0	0.0				
OASPL		114.0	104.8		83.8	49.2				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: NP 3 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-5 / 98				CN-6 / 102						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	80.0	111.5	89.0	43.1	83.9	49.3				
2	160.0	110.0	96.6	86.2	77.6	55.1				
3	240.0	108.2	99.6	129.3	0.0	0.0				
4	320.0	105.9	99.3	172.4	0.0	0.0				
5	400.0	104.7	99.9	215.5	0.0	0.0				
6	480.0	102.7	99.5	258.6	0.0	0.0				
7	560.0	98.5	95.3	301.7	0.0	0.0				
8	640.0	97.7	95.8	344.8	0.0	0.0				
9	720.0	96.2	95.4	387.9	0.0	0.0				
10	800.0	92.1	91.3	431.0	0.0	0.0				
11	880.0	89.9	89.1	474.1	0.0	0.0				
12	960.0	88.1	88.1	517.2	0.0	0.0				
13	1040.0	85.0	85.0	560.3	0.0	0.0				
14	1120.0	80.7	80.7	603.4	0.0	0.0				
15	1200.0	79.1	79.7	646.5	0.0	0.0				
16	1280.0	78.3	78.9	689.6	0.0	0.0				
17	1360.0	73.3	73.9	732.7	0.0	0.0				
18	1440.0	69.4	70.4	775.8	0.0	0.0				
19	1520.0	66.8	67.8	818.9	0.0	0.0				
20	1600.0	0.0	0.0	862.0	0.0	0.0				
21	1680.0	0.0	0.0	905.1	0.0	0.0				
22	1760.0	0.0	0.0	948.2	0.0	0.0				
23	1840.0	0.0	0.0	991.3	0.0	0.0				
24	1920.0	0.0	0.0	1034.4	0.0	0.0				
25	2000.0	0.0	0.0	1077.5	0.0	0.0				
26	2080.0	0.0	0.0	1120.6	0.0	0.0				
27	2160.0	0.0	0.0	1163.7	0.0	0.0				
28	2240.0	0.0	0.0	1206.8	0.0	0.0				
29	2320.0	0.0	0.0	1249.9	0.0	0.0				
30	2400.0	0.0	0.0	1293.0	0.0	0.0				
31	2480.0	0.0	0.0	1336.1	0.0	0.0				
32	2560.0	0.0	0.0	1379.2	0.0	0.0				
33	2640.0	0.0	0.0	1422.3	0.0	0.0				
34	2720.0	0.0	0.0	1465.4	0.0	0.0				
35	2800.0	0.0	0.0	1508.5	0.0	0.0				
36	2880.0	0.0	0.0	1551.6	0.0	0.0				
37	2960.0	0.0	0.0	1594.7	0.0	0.0				
38	3040.0	0.0	0.0	1637.8	0.0	0.0				
39	3120.0	0.0	0.0	1680.9	0.0	0.0				
40	3200.0	0.0	0.0	1724.0	0.0	0.0				
OASPL		116.2	107.5		84.8	56.1				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-5 / 98				CN-6 / 102						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	80.0	114.7	92.2	43.1	84.1	49.5				
2	160.0	110.0	96.6	86.2	0.0	0.0				
3	240.0	110.0	101.4	129.3	0.0	0.0				
4	320.0	106.6	100.0	172.4	0.0	0.0				
5	400.0	105.3	100.5	215.5	0.0	0.0				
6	480.0	102.0	98.8	258.6	0.0	0.0				
7	560.0	101.1	97.9	301.7	0.0	0.0				
8	640.0	99.6	97.7	344.8	0.0	0.0				
9	720.0	95.5	94.7	387.9	0.0	0.0				
10	800.0	93.3	92.5	431.0	0.0	0.0				
11	880.0	91.7	90.9	474.1	0.0	0.0				
12	960.0	86.0	86.0	517.2	0.0	0.0				
13	1040.0	86.2	86.2	560.3	0.0	0.0				
14	1120.0	84.6	84.6	603.4	0.0	0.0				
15	1200.0	79.7	80.3	646.5	0.0	0.0				
16	1280.0	76.4	77.0	689.6	0.0	0.0				
17	1360.0	74.8	75.4	732.7	0.0	0.0				
18	1440.0	71.5	72.5	775.8	0.0	0.0				
19	1520.0	68.9	69.9	818.9	0.0	0.0				
20	1600.0	62.1	63.1	862.0	0.0	0.0				
21	1680.0	0.0	0.0	905.1	0.0	0.0				
22	1760.0	0.0	0.0	948.2	0.0	0.0				
23	1840.0	0.0	0.0	991.3	0.0	0.0				
24	1920.0	0.0	0.0	1034.4	0.0	0.0				
25	2000.0	0.0	0.0	1077.5	0.0	0.0				
26	2080.0	0.0	0.0	1120.6	0.0	0.0				
27	2160.0	0.0	0.0	1163.7	0.0	0.0				
28	2240.0	0.0	0.0	1206.8	0.0	0.0				
29	2320.0	0.0	0.0	1249.9	0.0	0.0				
30	2400.0	0.0	0.0	1293.0	0.0	0.0				
31	2480.0	0.0	0.0	1336.1	0.0	0.0				
32	2560.0	0.0	0.0	1379.2	0.0	0.0				
33	2640.0	0.0	0.0	1422.3	0.0	0.0				
34	2720.0	0.0	0.0	1465.4	0.0	0.0				
35	2800.0	0.0	0.0	1508.5	0.0	0.0				
36	2880.0	0.0	0.0	1551.6	0.0	0.0				
37	2960.0	0.0	0.0	1594.7	0.0	0.0				
38	3040.0	0.0	0.0	1637.8	0.0	0.0				
39	3120.0	0.0	0.0	1680.9	0.0	0.0				
40	3200.0	0.0	0.0	1724.0	0.0	0.0				
OASPL		118.0	108.3		84.1	49.5				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN											
CN-5 / 98				CN-6 / 102							
HN	F	SPL	SPLA	F	SPL	SPLA		F	SPL	SPLA	
1	80.0	117.1	94.6	43.1	80.3	45.7					
2	160.0	111.2	97.8	86.2	0.0	0.0					
3	240.0	108.9	100.3	129.3	0.0	0.0					
4	320.0	111.3	104.7	172.4	0.0	0.0					
5	400.0	105.1	100.3	215.5	0.0	0.0					
6	480.0	99.7	96.5	258.6	0.0	0.0					
7	560.0	100.5	97.3	301.7	0.0	0.0					
8	640.0	99.3	97.4	344.8	0.0	0.0					
9	720.0	93.6	92.8	387.9	0.0	0.0					
10	800.0	92.5	91.7	431.0	0.0	0.0					
11	880.0	86.8	86.0	474.1	0.0	0.0					
12	960.0	87.7	87.7	517.2	0.0	0.0					
13	1040.0	85.0	85.0	560.3	0.0	0.0					
14	1120.0	78.8	78.8	603.4	0.0	0.0					
15	1200.0	78.5	79.1	646.5	0.0	0.0					
16	1280.0	77.0	77.6	689.6	0.0	0.0					
17	1360.0	71.8	72.4	732.7	0.0	0.0					
18	1440.0	67.1	68.1	775.8	0.0	0.0					
19	1520.0	67.5	68.5	818.9	0.0	0.0					
20	1600.0	61.1	62.1	862.0	0.0	0.0					
21	1680.0	0.0	0.0	905.1	0.0	0.0					
22	1760.0	0.0	0.0	948.2	0.0	0.0					
23	1840.0	0.0	0.0	991.3	0.0	0.0					
24	1920.0	0.0	0.0	1034.4	0.0	0.0					
25	2000.0	0.0	0.0	1077.5	0.0	0.0					
26	2080.0	0.0	0.0	1120.6	0.0	0.0					
27	2160.0	0.0	0.0	1163.7	0.0	0.0					
28	2240.0	0.0	0.0	1206.8	0.0	0.0					
29	2320.0	0.0	0.0	1249.9	0.0	0.0					
30	2400.0	0.0	0.0	1293.0	0.0	0.0					
31	2480.0	0.0	0.0	1336.1	0.0	0.0					
32	2560.0	0.0	0.0	1379.2	0.0	0.0					
33	2640.0	0.0	0.0	1422.3	0.0	0.0					
34	2720.0	0.0	0.0	1465.4	0.0	0.0					
35	2800.0	0.0	0.0	1508.5	0.0	0.0					
36	2880.0	0.0	0.0	1551.6	0.0	0.0					
37	2960.0	0.0	0.0	1594.7	0.0	0.0					
38	3040.0	0.0	0.0	1637.8	0.0	0.0					
39	3120.0	0.0	0.0	1680.9	0.0	0.0					
40	3200.0	0.0	0.0	1724.0	0.0	0.0					
OASPL		119.7	109.0		80.3	45.7					

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN									
CN-5 / 98				CN-6 / 102					
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	80.0	117.7	95.2	43.1	78.3	43.7			
2	160.0	109.6	96.2	86.2	0.0	0.0			
3	240.0	106.9	98.3	129.3	0.0	0.0			
4	320.0	107.7	101.1	172.4	0.0	0.0			
5	400.0	101.5	96.7	215.5	0.0	0.0			
6	480.0	95.9	92.7	258.6	0.0	0.0			
7	560.0	97.4	94.2	301.7	0.0	0.0			
8	640.0	91.3	89.4	344.8	0.0	0.0			
9	720.0	80.0	79.2	387.9	0.0	0.0			
10	800.0	85.1	84.3	431.0	0.0	0.0			
11	880.0	82.2	81.4	474.1	0.0	0.0			
12	960.0	76.2	76.2	517.2	0.0	0.0			
13	1040.0	66.4	66.4	560.3	0.0	0.0			
14	1120.0	0.0	0.0	603.4	0.0	0.0			
15	1200.0	0.0	0.0	646.5	0.0	0.0			
16	1280.0	0.0	0.0	689.6	0.0	0.0			
17	1360.0	0.0	0.0	732.7	0.0	0.0			
18	1440.0	0.0	0.0	775.8	0.0	0.0			
19	1520.0	0.0	0.0	818.9	0.0	0.0			
20	1600.0	0.0	0.0	862.0	0.0	0.0			
21	1680.0	0.0	0.0	905.1	0.0	0.0			
22	1760.0	0.0	0.0	948.2	0.0	0.0			
23	1840.0	0.0	0.0	991.3	0.0	0.0			
24	1920.0	0.0	0.0	1034.4	0.0	0.0			
25	2000.0	0.0	0.0	1077.5	0.0	0.0			
26	2080.0	0.0	0.0	1120.6	0.0	0.0			
27	2160.0	0.0	0.0	1163.7	0.0	0.0			
28	2240.0	0.0	0.0	1206.8	0.0	0.0			
29	2320.0	0.0	0.0	1249.9	0.0	0.0			
30	2400.0	0.0	0.0	1293.0	0.0	0.0			
31	2480.0	0.0	0.0	1336.1	0.0	0.0			
32	2560.0	0.0	0.0	1379.2	0.0	0.0			
33	2640.0	0.0	0.0	1422.3	0.0	0.0			
34	2720.0	0.0	0.0	1465.4	0.0	0.0			
35	2800.0	0.0	0.0	1508.5	0.0	0.0			
36	2880.0	0.0	0.0	1551.6	0.0	0.0			
37	2960.0	0.0	0.0	1594.7	0.0	0.0			
38	3040.0	0.0	0.0	1637.8	0.0	0.0			
39	3120.0	0.0	0.0	1680.9	0.0	0.0			
40	3200.0	0.0	0.0	1724.0	0.0	0.0			
OASPL		119.1	105.8		78.3	43.7			

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-5 / 98				CN-6 / 102						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	80.0	114.9	92.4	43.1	77.1	42.5				
2	160.0	104.8	91.4	86.2	0.0	0.0				
3	240.0	102.5	93.9	129.3	0.0	0.0				
4	320.0	94.9	88.3	172.4	0.0	0.0				
5	400.0	85.0	80.2	215.5	0.0	0.0				
6	480.0	82.9	79.7	258.6	0.0	0.0				
7	560.0	77.7	74.5	301.7	0.0	0.0				
8	640.0	0.0	0.0	344.8	0.0	0.0				
9	720.0	0.0	0.0	387.9	0.0	0.0				
10	800.0	0.0	0.0	431.0	0.0	0.0				
11	880.0	0.0	0.0	474.1	0.0	0.0				
12	960.0	0.0	0.0	517.2	0.0	0.0				
13	1040.0	0.0	0.0	560.3	0.0	0.0				
14	1120.0	0.0	0.0	603.4	0.0	0.0				
15	1200.0	0.0	0.0	646.5	0.0	0.0				
16	1280.0	0.0	0.0	689.6	0.0	0.0				
17	1360.0	0.0	0.0	732.7	0.0	0.0				
18	1440.0	0.0	0.0	775.8	0.0	0.0				
19	1520.0	0.0	0.0	818.9	0.0	0.0				
20	1600.0	0.0	0.0	862.0	0.0	0.0				
21	1680.0	0.0	0.0	905.1	0.0	0.0				
22	1760.0	0.0	0.0	948.2	0.0	0.0				
23	1840.0	0.0	0.0	991.3	0.0	0.0				
24	1920.0	0.0	0.0	1034.4	0.0	0.0				
25	2000.0	0.0	0.0	1077.5	0.0	0.0				
26	2080.0	0.0	0.0	1120.6	0.0	0.0				
27	2160.0	0.0	0.0	1163.7	0.0	0.0				
28	2240.0	0.0	0.0	1206.8	0.0	0.0				
29	2320.0	0.0	0.0	1249.9	0.0	0.0				
30	2400.0	0.0	0.0	1293.0	0.0	0.0				
31	2480.0	0.0	0.0	1336.1	0.0	0.0				
32	2560.0	0.0	0.0	1379.2	0.0	0.0				
33	2640.0	0.0	0.0	1422.3	0.0	0.0				
34	2720.0	0.0	0.0	1465.4	0.0	0.0				
35	2800.0	0.0	0.0	1508.5	0.0	0.0				
36	2880.0	0.0	0.0	1551.6	0.0	0.0				
37	2960.0	0.0	0.0	1594.7	0.0	0.0				
38	3040.0	0.0	0.0	1637.8	0.0	0.0				
39	3120.0	0.0	0.0	1680.9	0.0	0.0				
40	3200.0	0.0	0.0	1724.0	0.0	0.0				
OASPL		115.6	98.1		77.1	42.5				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-5 / 98				CN-6 / 102						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	80.0	113.5	91.0	43.1	83.7	49.1				
2	160.0	108.1	94.7	86.2	0.0	0.0				
3	240.0	107.6	99.0	129.3	0.0	0.0				
4	320.0	108.1	101.5	172.4	0.0	0.0				
5	400.0	104.0	99.2	215.5	0.0	0.0				
6	480.0	100.0	96.8	258.6	0.0	0.0				
7	560.0	100.9	97.7	301.7	0.0	0.0				
8	640.0	96.0	94.1	344.8	0.0	0.0				
9	720.0	92.8	92.0	387.9	0.0	0.0				
10	800.0	92.7	91.9	431.0	0.0	0.0				
11	880.0	89.5	88.7	474.1	0.0	0.0				
12	960.0	86.0	86.0	517.2	0.0	0.0				
13	1040.0	85.3	85.3	560.3	0.0	0.0				
14	1120.0	82.6	82.6	603.4	0.0	0.0				
15	1200.0	81.9	82.5	646.5	0.0	0.0				
16	1280.0	72.8	73.4	689.6	0.0	0.0				
17	1360.0	0.0	0.0	732.7	0.0	0.0				
18	1440.0	0.0	0.0	775.8	0.0	0.0				
19	1520.0	0.0	0.0	818.9	0.0	0.0				
20	1600.0	0.0	0.0	862.0	0.0	0.0				
21	1680.0	0.0	0.0	905.1	0.0	0.0				
22	1760.0	0.0	0.0	948.2	0.0	0.0				
23	1840.0	0.0	0.0	991.3	0.0	0.0				
24	1920.0	0.0	0.0	1034.4	0.0	0.0				
25	2000.0	0.0	0.0	1077.5	0.0	0.0				
26	2080.0	0.0	0.0	1120.6	0.0	0.0				
27	2160.0	0.0	0.0	1163.7	0.0	0.0				
28	2240.0	0.0	0.0	1206.8	0.0	0.0				
29	2320.0	0.0	0.0	1249.9	0.0	0.0				
30	2400.0	0.0	0.0	1293.0	0.0	0.0				
31	2480.0	0.0	0.0	1336.1	0.0	0.0				
32	2560.0	0.0	0.0	1379.2	0.0	0.0				
33	2640.0	0.0	0.0	1422.3	0.0	0.0				
34	2720.0	0.0	0.0	1465.4	0.0	0.0				
35	2800.0	0.0	0.0	1508.5	0.0	0.0				
36	2880.0	0.0	0.0	1551.6	0.0	0.0				
37	2960.0	0.0	0.0	1594.7	0.0	0.0				
38	3040.0	0.0	0.0	1637.8	0.0	0.0				
39	3120.0	0.0	0.0	1680.9	0.0	0.0				
40	3200.0	0.0	0.0	1724.0	0.0	0.0				
OASPL		116.7	107.2		83.7	49.1				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN									
DN-1 / 97			DN-3 / 91						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	60.0	103.9	77.7	70.0	105.2	79.0			
2	120.0	92.6	76.5	140.0	94.3	78.2			
3	180.0	84.7	73.8	210.0	93.5	82.6			
4	240.0	82.0	73.4	280.0	88.6	80.0			
5	300.0	63.5	56.9	350.0	84.8	78.2			
6	360.0	69.2	64.4	420.0	69.3	64.5			
7	420.0	64.3	59.5	490.0	0.0	0.0			
8	480.0	67.3	64.1	560.0	0.0	0.0			
9	540.0	59.4	56.2	630.0	0.0	0.0			
10	600.0	0.0	0.0	700.0	0.0	0.0			
11	660.0	0.0	0.0	770.0	0.0	0.0			
12	720.0	0.0	0.0	840.0	0.0	0.0			
13	780.0	0.0	0.0	910.0	0.0	0.0			
14	840.0	0.0	0.0	980.0	0.0	0.0			
15	900.0	0.0	0.0	1050.0	0.0	0.0			
16	960.0	0.0	0.0	1120.0	0.0	0.0			
17	1020.0	0.0	0.0	1190.0	0.0	0.0			
18	1080.0	0.0	0.0	1260.0	0.0	0.0			
19	1140.0	0.0	0.0	1330.0	0.0	0.0			
20	1200.0	0.0	0.0	1400.0	0.0	0.0			
21	1260.0	0.0	0.0	1470.0	0.0	0.0			
22	1320.0	0.0	0.0	1540.0	0.0	0.0			
23	1380.0	0.0	0.0	1610.0	0.0	0.0			
24	1440.0	0.0	0.0	1680.0	0.0	0.0			
25	1500.0	0.0	0.0	1750.0	0.0	0.0			
26	1560.0	0.0	0.0	1820.0	0.0	0.0			
27	1620.0	0.0	0.0	1890.0	0.0	0.0			
28	1680.0	0.0	0.0	1960.0	0.0	0.0			
29	1740.0	0.0	0.0	2030.0	0.0	0.0			
30	1800.0	0.0	0.0	2100.0	0.0	0.0			
31	1860.0	0.0	0.0	2170.0	0.0	0.0			
32	1920.0	0.0	0.0	2240.0	0.0	0.0			
33	1980.0	0.0	0.0	2310.0	0.0	0.0			
34	2040.0	0.0	0.0	2380.0	0.0	0.0			
35	2100.0	0.0	0.0	2450.0	0.0	0.0			
36	2160.0	0.0	0.0	2520.0	0.0	0.0			
37	2220.0	0.0	0.0	2590.0	0.0	0.0			
38	2280.0	0.0	0.0	2660.0	0.0	0.0			
39	2340.0	0.0	0.0	2730.0	0.0	0.0			
40	2400.0	0.0	0.0	2800.0	0.0	0.0			
OASPL		104.3	82.0			105.9	86.9		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 { PITCH ANGLE: 29.0 DEG }

DATA-POINT / RUN									
DN-1 / 97				DN-3 / 91					
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	60.0	105.9	79.7	70.0	110.0	83.8			
2	120.0	101.4	85.3	140.0	106.1	90.0			
3	180.0	96.6	85.7	210.0	102.4	91.5			
4	240.0	86.5	77.9	280.0	98.3	89.7			
5	300.0	81.9	75.3	350.0	92.2	85.6			
6	360.0	68.5	63.7	420.0	91.3	86.5			
7	420.0	73.3	68.5	490.0	87.2	84.0			
8	480.0	66.8	63.6	560.0	81.6	78.4			
9	540.0	59.1	55.9	630.0	75.1	73.2			
10	600.0	0.0	0.0	700.0	72.1	70.2			
11	660.0	0.0	0.0	770.0	0.0	0.0			
12	720.0	0.0	0.0	840.0	0.0	0.0			
13	780.0	0.0	0.0	910.0	0.0	0.0			
14	840.0	0.0	0.0	980.0	0.0	0.0			
15	900.0	0.0	0.0	1050.0	0.0	0.0			
16	960.0	0.0	0.0	1120.0	0.0	0.0			
17	1020.0	0.0	0.0	1190.0	0.0	0.0			
18	1080.0	0.0	0.0	1260.0	0.0	0.0			
19	1140.0	0.0	0.0	1330.0	0.0	0.0			
20	1200.0	0.0	0.0	1400.0	0.0	0.0			
21	1260.0	0.0	0.0	1470.0	0.0	0.0			
22	1320.0	0.0	0.0	1540.0	0.0	0.0			
23	1380.0	0.0	0.0	1610.0	0.0	0.0			
24	1440.0	0.0	0.0	1680.0	0.0	0.0			
25	1500.0	0.0	0.0	1750.0	0.0	0.0			
26	1560.0	0.0	0.0	1820.0	0.0	0.0			
27	1620.0	0.0	0.0	1890.0	0.0	0.0			
28	1680.0	0.0	0.0	1960.0	0.0	0.0			
29	1740.0	0.0	0.0	2030.0	0.0	0.0			
30	1800.0	0.0	0.0	2100.0	0.0	0.0			
31	1860.0	0.0	0.0	2170.0	0.0	0.0			
32	1920.0	0.0	0.0	2240.0	0.0	0.0			
33	1980.0	0.0	0.0	2310.0	0.0	0.0			
34	2040.0	0.0	0.0	2380.0	0.0	0.0			
35	2100.0	0.0	0.0	2450.0	0.0	0.0			
36	2160.0	0.0	0.0	2520.0	0.0	0.0			
37	2220.0	0.0	0.0	2590.0	0.0	0.0			
38	2280.0	0.0	0.0	2660.0	0.0	0.0			
39	2340.0	0.0	0.0	2730.0	0.0	0.0			
40	2400.0	0.0	0.0	2800.0	0.0	0.0			
OASPL		107.6	89.6			112.3	96.8		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN											
DN-1 / 97				DN-3 / 91							
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA		
1	60.0	108.1	81.9	70.0	112.9	86.7					
2	120.0	103.1	87.0	140.0	108.2	92.1					
3	180.0	95.9	85.0	210.0	103.0	92.1					
4	240.0	88.9	80.3	280.0	98.7	90.1					
5	300.0	81.1	74.5	350.0	94.5	87.9					
6	360.0	81.3	76.5	420.0	90.9	86.1					
7	420.0	63.5	58.7	490.0	84.3	81.1					
8	480.0	0.0	0.0	560.0	79.4	76.2					
9	540.0	0.0	0.0	630.0	76.4	74.5					
10	600.0	0.0	0.0	700.0	72.7	70.8					
11	660.0	0.0	0.0	770.0	69.9	69.1					
12	720.0	0.0	0.0	840.0	0.0	0.0					
13	780.0	0.0	0.0	910.0	0.0	0.0					
14	840.0	0.0	0.0	980.0	0.0	0.0					
15	900.0	0.0	0.0	1050.0	0.0	0.0					
16	960.0	0.0	0.0	1120.0	0.0	0.0					
17	1020.0	0.0	0.0	1190.0	0.0	0.0					
18	1080.0	0.0	0.0	1260.0	0.0	0.0					
19	1140.0	0.0	0.0	1330.0	0.0	0.0					
20	1200.0	0.0	0.0	1400.0	0.0	0.0					
21	1260.0	0.0	0.0	1470.0	0.0	0.0					
22	1320.0	0.0	0.0	1540.0	0.0	0.0					
23	1380.0	0.0	0.0	1610.0	0.0	0.0					
24	1440.0	0.0	0.0	1680.0	0.0	0.0					
25	1500.0	0.0	0.0	1750.0	0.0	0.0					
26	1560.0	0.0	0.0	1820.0	0.0	0.0					
27	1620.0	0.0	0.0	1890.0	0.0	0.0					
28	1680.0	0.0	0.0	1960.0	0.0	0.0					
29	1740.0	0.0	0.0	2030.0	0.0	0.0					
30	1800.0	0.0	0.0	2100.0	0.0	0.0					
31	1860.0	0.0	0.0	2170.0	0.0	0.0					
32	1920.0	0.0	0.0	2240.0	0.0	0.0					
33	1980.0	0.0	0.0	2310.0	0.0	0.0					
34	2040.0	0.0	0.0	2380.0	0.0	0.0					
35	2100.0	0.0	0.0	2450.0	0.0	0.0					
36	2160.0	0.0	0.0	2520.0	0.0	0.0					
37	2220.0	0.0	0.0	2590.0	0.0	0.0					
38	2280.0	0.0	0.0	2660.0	0.0	0.0					
39	2340.0	0.0	0.0	2730.0	0.0	0.0					
40	2400.0	0.0	0.0	2800.0	0.0	0.0					
OASPL		109.5	90.6			114.7	97.8				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN									
DN-1 / 97				DN-3 / 91					
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA
1	60.0	110.0	83.8	70.0	114.8	88.6			
2	120.0	104.2	88.1	140.0	109.5	93.4			
3	180.0	96.5	85.6	210.0	103.6	92.7			
4	240.0	90.7	82.1	280.0	101.6	93.0			
5	300.0	83.0	76.4	350.0	96.7	90.1			
6	360.0	79.8	75.0	420.0	93.7	88.9			
7	420.0	75.8	71.0	490.0	89.1	85.9			
8	480.0	63.4	60.2	560.0	85.7	82.5			
9	540.0	0.0	0.0	630.0	80.4	78.5			
10	600.0	0.0	0.0	700.0	74.2	72.3			
11	660.0	0.0	0.0	770.0	0.0	0.0			
12	720.0	0.0	0.0	840.0	0.0	0.0			
13	780.0	0.0	0.0	910.0	0.0	0.0			
14	840.0	0.0	0.0	980.0	0.0	0.0			
15	900.0	0.0	0.0	1050.0	0.0	0.0			
16	960.0	0.0	0.0	1120.0	0.0	0.0			
17	1020.0	0.0	0.0	1190.0	0.0	0.0			
18	1080.0	0.0	0.0	1260.0	0.0	0.0			
19	1140.0	0.0	0.0	1330.0	0.0	0.0			
20	1200.0	0.0	0.0	1400.0	0.0	0.0			
21	1260.0	0.0	0.0	1470.0	0.0	0.0			
22	1320.0	0.0	0.0	1540.0	0.0	0.0			
23	1380.0	0.0	0.0	1610.0	0.0	0.0			
24	1440.0	0.0	0.0	1680.0	0.0	0.0			
25	1500.0	0.0	0.0	1750.0	0.0	0.0			
26	1560.0	0.0	0.0	1820.0	0.0	0.0			
27	1620.0	0.0	0.0	1890.0	0.0	0.0			
28	1680.0	0.0	0.0	1960.0	0.0	0.0			
29	1740.0	0.0	0.0	2030.0	0.0	0.0			
30	1800.0	0.0	0.0	2100.0	0.0	0.0			
31	1860.0	0.0	0.0	2170.0	0.0	0.0			
32	1920.0	0.0	0.0	2240.0	0.0	0.0			
33	1980.0	0.0	0.0	2310.0	0.0	0.0			
34	2040.0	0.0	0.0	2380.0	0.0	0.0			
35	2100.0	0.0	0.0	2450.0	0.0	0.0			
36	2160.0	0.0	0.0	2520.0	0.0	0.0			
37	2220.0	0.0	0.0	2590.0	0.0	0.0			
38	2280.0	0.0	0.0	2660.0	0.0	0.0			
39	2340.0	0.0	0.0	2730.0	0.0	0.0			
40	2400.0	0.0	0.0	2800.0	0.0	0.0			
OASPL		111.2	91.8			116.4	99.6		

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-1 / 97				DN-3 / 91						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	111.3	85.1	70.0	115.9	89.7				
2	120.0	105.1	89.0	140.0	111.4	95.3				
3	180.0	97.0	86.1	210.0	101.6	90.7				
4	240.0	87.4	78.8	280.0	101.6	93.0				
5	300.0	87.1	80.5	350.0	99.6	93.0				
6	360.0	74.5	69.7	420.0	90.3	85.5				
7	420.0	73.1	68.3	490.0	87.5	84.3				
8	480.0	70.2	67.0	560.0	83.3	80.1				
9	540.0	59.8	56.6	630.0	78.1	76.2				
10	600.0	0.0	0.0	700.0	74.4	72.5				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		112.4	92.4		117.6	100.1				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-1 / 97				DN-3 / 91						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	111.2	85.0	70.0	115.1	88.9				
2	120.0	103.7	87.6	140.0	110.0	93.9				
3	180.0	94.1	83.2	210.0	100.1	89.2				
4	240.0	83.7	75.1	280.0	99.5	90.9				
5	300.0	82.7	76.1	350.0	96.1	89.5				
6	360.0	78.4	73.6	420.0	85.7	80.9				
7	420.0	72.8	68.0	490.0	85.0	81.8				
8	480.0	63.8	60.6	560.0	78.8	75.6				
9	540.0	0.0	0.0	630.0	71.6	69.7				
10	600.0	0.0	0.0	700.0	0.0	0.0				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		112.0	90.8		116.5	98.1				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-1 / 97				DN-3 / 91						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	109.3	83.1	70.0	113.2	87.0				
2	120.0	96.6	80.5	140.0	103.9	87.8				
3	180.0	85.1	74.2	210.0	95.6	84.7				
4	240.0	68.7	60.1	280.0	78.4	69.8				
5	300.0	75.6	69.0	350.0	0.0	0.0				
6	360.0	73.9	69.1	420.0	0.0	0.0				
7	420.0	73.4	68.6	490.0	0.0	0.0				
8	480.0	66.7	63.5	560.0	0.0	0.0				
9	540.0	60.0	56.8	630.0	0.0	0.0				
10	600.0	0.0	0.0	700.0	0.0	0.0				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		109.5	85.7		113.8	91.5				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-1 / 97				DN-3 / 91						
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	111.8	85.6	70.0	111.6	85.4				
2	120.0	103.6	87.5	140.0	108.0	91.9				
3	180.0	96.1	85.2	210.0	98.9	88.0				
4	240.0	85.0	76.4	280.0	102.3	93.7				
5	300.0	85.6	79.0	350.0	99.3	92.7				
6	360.0	79.4	74.6	420.0	91.2	86.4				
7	420.0	63.4	58.6	490.0	84.3	81.1				
8	480.0	67.2	64.0	560.0	86.1	82.9				
9	540.0	64.2	61.0	630.0	76.3	74.4				
10	600.0	58.7	56.8	700.0	0.0	0.0				
11	660.0	0.0	0.0	770.0	0.0	0.0				
12	720.0	0.0	0.0	840.0	0.0	0.0				
13	780.0	0.0	0.0	910.0	0.0	0.0				
14	840.0	0.0	0.0	980.0	0.0	0.0				
15	900.0	0.0	0.0	1050.0	0.0	0.0				
16	960.0	0.0	0.0	1120.0	0.0	0.0				
17	1020.0	0.0	0.0	1190.0	0.0	0.0				
18	1080.0	0.0	0.0	1260.0	0.0	0.0				
19	1140.0	0.0	0.0	1330.0	0.0	0.0				
20	1200.0	0.0	0.0	1400.0	0.0	0.0				
21	1260.0	0.0	0.0	1470.0	0.0	0.0				
22	1320.0	0.0	0.0	1540.0	0.0	0.0				
23	1380.0	0.0	0.0	1610.0	0.0	0.0				
24	1440.0	0.0	0.0	1680.0	0.0	0.0				
25	1500.0	0.0	0.0	1750.0	0.0	0.0				
26	1560.0	0.0	0.0	1820.0	0.0	0.0				
27	1620.0	0.0	0.0	1890.0	0.0	0.0				
28	1680.0	0.0	0.0	1960.0	0.0	0.0				
29	1740.0	0.0	0.0	2030.0	0.0	0.0				
30	1800.0	0.0	0.0	2100.0	0.0	0.0				
31	1860.0	0.0	0.0	2170.0	0.0	0.0				
32	1920.0	0.0	0.0	2240.0	0.0	0.0				
33	1980.0	0.0	0.0	2310.0	0.0	0.0				
34	2040.0	0.0	0.0	2380.0	0.0	0.0				
35	2100.0	0.0	0.0	2450.0	0.0	0.0				
36	2160.0	0.0	0.0	2520.0	0.0	0.0				
37	2220.0	0.0	0.0	2590.0	0.0	0.0				
38	2280.0	0.0	0.0	2660.0	0.0	0.0				
39	2340.0	0.0	0.0	2730.0	0.0	0.0				
40	2400.0	0.0	0.0	2800.0	0.0	0.0				
OASPL		112.5	91.5		113.9	98.7				

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 1 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	80.5	45.9	60.0	104.1	77.9	65.0	102.3	76.1	
2	71.2	68.4	45.9	120.0	93.5	77.4	130.0	100.4	84.3	
3	106.8	0.0	0.0	180.0	81.1	70.2	195.0	87.0	76.1	
4	142.4	0.0	0.0	240.0	81.9	73.3	260.0	82.1	73.5	
5	178.0	0.0	0.0	300.0	76.1	69.5	325.0	75.9	69.3	
6	213.6	0.0	0.0	360.0	68.6	63.8	390.0	77.2	72.4	
7	249.2	0.0	0.0	420.0	66.7	61.9	455.0	72.2	69.0	
8	284.8	0.0	0.0	480.0	69.2	66.0	520.0	70.0	66.8	
9	320.4	0.0	0.0	540.0	60.8	57.6	585.0	65.7	63.8	
10	356.0	0.0	0.0	600.0	0.0	0.0	650.0	62.9	61.0	
11	391.6	0.0	0.0	660.0	0.0	0.0	715.0	56.6	55.8	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	0.0	0.0	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	0.0	0.0	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	0.0	0.0	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		80.7	48.9	104.5		82.2	104.6		86.2	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 2 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	77.9	43.3	60.0	105.6	79.4	65.0	108.8	82.6	
2	71.2	0.0	0.0	120.0	99.7	83.6	130.0	104.5	88.4	
3	106.8	0.0	0.0	180.0	96.1	85.2	195.0	96.2	85.3	
4	142.4	0.0	0.0	240.0	84.7	76.1	260.0	91.7	83.1	
5	178.0	0.0	0.0	300.0	78.5	71.9	325.0	85.8	79.2	
6	213.6	0.0	0.0	360.0	75.8	71.0	390.0	82.4	77.6	
7	249.2	0.0	0.0	420.0	74.7	69.9	455.0	80.7	77.5	
8	284.8	0.0	0.0	480.0	69.5	66.3	520.0	68.3	65.1	
9	320.4	0.0	0.0	540.0	64.0	60.8	585.0	70.7	68.8	
10	356.0	0.0	0.0	600.0	71.9	70.0	650.0	66.5	64.6	
11	391.6	0.0	0.0	660.0	59.5	57.6	715.0	56.0	55.2	
12	427.2	0.0	0.0	720.0	56.1	55.3	780.0	0.0	0.0	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	0.0	0.0	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	0.0	0.0	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		77.9	43.3	107.0		88.7	110.4		92.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 3 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	86.9	52.3	60.0	109.2	83.0	65.0	110.7	84.5	
2	71.2	66.7	44.2	120.0	101.6	85.5	130.0	105.9	89.8	
3	106.8	0.0	0.0	180.0	95.8	84.9	195.0	100.3	89.4	
4	142.4	0.0	0.0	240.0	88.3	79.7	260.0	94.5	85.9	
5	178.0	0.0	0.0	300.0	67.4	60.8	325.0	91.4	84.8	
6	213.6	0.0	0.0	360.0	69.5	64.7	390.0	83.1	78.3	
7	249.2	0.0	0.0	420.0	68.4	63.6	455.0	78.9	75.7	
8	284.8	0.0	0.0	480.0	68.3	65.1	520.0	77.1	73.9	
9	320.4	0.0	0.0	540.0	65.1	61.9	585.0	72.2	70.3	
10	356.0	0.0	0.0	600.0	71.2	69.3	650.0	54.6	52.7	
11	391.6	0.0	0.0	660.0	57.9	56.0	715.0	0.0	0.0	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	0.0	0.0	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	0.0	0.0	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	0.0	0.0	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		86.9	52.9	110.1		89.9	112.4		94.7	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 4 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	88.1	53.5	60.0	110.9	84.7	65.0	113.3	87.1	
2	71.2	71.1	48.6	120.0	102.9	86.8	130.0	106.9	90.8	
3	106.8	0.0	0.0	180.0	96.1	85.2	195.0	100.2	89.3	
4	142.4	0.0	0.0	240.0	90.7	82.1	260.0	97.0	88.4	
5	178.0	0.0	0.0	300.0	82.6	76.0	325.0	93.3	86.7	
6	213.6	0.0	0.0	360.0	80.3	75.5	390.0	88.5	83.7	
7	249.2	0.0	0.0	420.0	74.0	69.2	455.0	81.8	78.6	
8	284.8	0.0	0.0	480.0	70.5	67.3	520.0	64.3	61.1	
9	320.4	0.0	0.0	540.0	63.7	60.5	585.0	74.4	72.5	
10	356.0	0.0	0.0	600.0	0.0	0.0	650.0	66.7	64.8	
11	391.6	0.0	0.0	660.0	0.0	0.0	715.0	63.9	63.1	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	65.6	64.8	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	59.3	58.5	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	0.0	0.0	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		88.2	54.7	111.7		91.3	114.5		96.1	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 5 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	88.9	54.3	60.0	111.8	85.6	65.0	115.0	88.8	
2	71.2	71.5	49.0	120.0	104.5	88.4	130.0	108.1	92.0	
3	106.8	0.0	0.0	180.0	95.5	84.6	195.0	100.5	89.6	
4	142.4	0.0	0.0	240.0	86.1	77.5	260.0	96.6	88.0	
5	178.0	0.0	0.0	300.0	87.5	80.9	325.0	92.6	86.0	
6	213.6	0.0	0.0	360.0	82.8	78.0	390.0	86.5	81.7	
7	249.2	0.0	0.0	420.0	75.5	70.7	455.0	83.0	79.8	
8	284.8	0.0	0.0	480.0	71.2	68.0	520.0	78.6	75.4	
9	320.4	0.0	0.0	540.0	67.2	64.0	585.0	71.8	69.9	
10	356.0	0.0	0.0	600.0	58.5	56.6	650.0	67.4	65.5	
11	391.6	0.0	0.0	660.0	0.0	0.0	715.0	67.2	66.4	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	68.2	67.4	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	60.5	59.7	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	63.1	63.1	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		89.0	55.5	112.6		92.1	116.0		96.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA



# DNW PROPELLER NOISE TEST

MICROPHONE: MP 6 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96			DN-2 / 93			DN-5 / 92				
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	87.5	52.9	60.0	110.7	84.5	65.0	115.5	89.3	
2	71.2	73.8	51.3	120.0	103.6	87.5	130.0	107.2	91.1	
3	106.8	0.0	0.0	180.0	93.1	82.2	195.0	96.8	85.9	
4	142.4	0.0	0.0	240.0	83.7	75.1	260.0	96.2	87.6	
5	178.0	0.0	0.0	300.0	78.8	72.2	325.0	90.9	84.3	
6	213.6	0.0	0.0	360.0	77.4	72.6	390.0	86.6	81.8	
7	249.2	0.0	0.0	420.0	74.3	69.5	455.0	74.6	71.4	
8	284.8	0.0	0.0	480.0	68.2	65.0	520.0	72.4	69.2	
9	320.4	0.0	0.0	540.0	63.2	60.0	585.0	72.2	70.3	
10	356.0	0.0	0.0	600.0	61.8	59.9	650.0	69.0	67.1	
11	391.6	0.0	0.0	660.0	0.0	0.0	715.0	68.1	67.3	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	67.8	67.0	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	64.2	63.4	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	59.7	59.7	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		87.7	55.2		111.6	90.4		116.2	95.5	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 7 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	81.9	47.3	60.0	105.2	79.0	65.0	112.9	86.7	
2	71.2	67.7	45.2	120.0	95.2	79.1	130.0	102.8	86.7	
3	106.8	0.0	0.0	180.0	83.7	72.8	195.0	93.6	82.7	
4	142.4	0.0	0.0	240.0	58.9	50.3	260.0	84.0	75.4	
5	178.0	0.0	0.0	300.0	0.0	0.0	325.0	76.3	69.7	
6	213.6	0.0	0.0	360.0	0.0	0.0	390.0	79.1	74.3	
7	249.2	0.0	0.0	420.0	0.0	0.0	455.0	73.7	70.5	
8	284.8	0.0	0.0	480.0	0.0	0.0	520.0	68.6	65.4	
9	320.4	0.0	0.0	540.0	0.0	0.0	585.0	72.2	70.3	
10	356.0	0.0	0.0	600.0	0.0	0.0	650.0	71.4	69.5	
11	391.6	0.0	0.0	660.0	0.0	0.0	715.0	69.2	68.4	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	62.1	61.3	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	0.0	0.0	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	0.0	0.0	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		82.1	49.4	105.7		82.6	113.3		90.9	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 9 ( PITCH ANGLE: 29.0 DEG )

DATA-POINT / RUN										
DN-4 / 96				DN-2 / 93			DN-5 / 92			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	35.6	85.1	50.5	60.0	110.8	84.6	65.0	113.7	87.5	
2	71.2	0.0	0.0	120.0	103.0	86.9	130.0	108.1	92.0	
3	106.8	0.0	0.0	180.0	95.2	84.3	195.0	97.1	86.2	
4	142.4	0.0	0.0	240.0	85.5	76.9	260.0	96.0	87.4	
5	178.0	0.0	0.0	300.0	84.3	77.7	325.0	90.4	83.8	
6	213.6	0.0	0.0	360.0	80.6	75.8	390.0	82.7	77.9	
7	249.2	0.0	0.0	420.0	69.6	64.8	455.0	79.7	76.5	
8	284.8	0.0	0.0	480.0	65.2	62.0	520.0	74.8	71.6	
9	320.4	0.0	0.0	540.0	0.0	0.0	585.0	72.1	70.2	
10	356.0	0.0	0.0	600.0	0.0	0.0	650.0	58.0	56.1	
11	391.6	0.0	0.0	660.0	0.0	0.0	715.0	0.0	0.0	
12	427.2	0.0	0.0	720.0	0.0	0.0	780.0	0.0	0.0	
13	462.8	0.0	0.0	780.0	0.0	0.0	845.0	0.0	0.0	
14	498.4	0.0	0.0	840.0	0.0	0.0	910.0	0.0	0.0	
15	534.0	0.0	0.0	900.0	0.0	0.0	975.0	0.0	0.0	
16	569.6	0.0	0.0	960.0	0.0	0.0	1040.0	0.0	0.0	
17	605.2	0.0	0.0	1020.0	0.0	0.0	1105.0	0.0	0.0	
18	640.8	0.0	0.0	1080.0	0.0	0.0	1170.0	0.0	0.0	
19	676.4	0.0	0.0	1140.0	0.0	0.0	1235.0	0.0	0.0	
20	712.0	0.0	0.0	1200.0	0.0	0.0	1300.0	0.0	0.0	
21	747.6	0.0	0.0	1260.0	0.0	0.0	1365.0	0.0	0.0	
22	783.2	0.0	0.0	1320.0	0.0	0.0	1430.0	0.0	0.0	
23	818.8	0.0	0.0	1380.0	0.0	0.0	1495.0	0.0	0.0	
24	854.4	0.0	0.0	1440.0	0.0	0.0	1560.0	0.0	0.0	
25	890.0	0.0	0.0	1500.0	0.0	0.0	1625.0	0.0	0.0	
26	925.6	0.0	0.0	1560.0	0.0	0.0	1690.0	0.0	0.0	
27	961.2	0.0	0.0	1620.0	0.0	0.0	1755.0	0.0	0.0	
28	996.8	0.0	0.0	1680.0	0.0	0.0	1820.0	0.0	0.0	
29	1032.4	0.0	0.0	1740.0	0.0	0.0	1885.0	0.0	0.0	
30	1068.0	0.0	0.0	1800.0	0.0	0.0	1950.0	0.0	0.0	
31	1103.6	0.0	0.0	1860.0	0.0	0.0	2015.0	0.0	0.0	
32	1139.2	0.0	0.0	1920.0	0.0	0.0	2080.0	0.0	0.0	
33	1174.8	0.0	0.0	1980.0	0.0	0.0	2145.0	0.0	0.0	
34	1210.4	0.0	0.0	2040.0	0.0	0.0	2210.0	0.0	0.0	
35	1246.0	0.0	0.0	2100.0	0.0	0.0	2275.0	0.0	0.0	
36	1281.6	0.0	0.0	2160.0	0.0	0.0	2340.0	0.0	0.0	
37	1317.2	0.0	0.0	2220.0	0.0	0.0	2405.0	0.0	0.0	
38	1352.8	0.0	0.0	2280.0	0.0	0.0	2470.0	0.0	0.0	
39	1388.4	0.0	0.0	2340.0	0.0	0.0	2535.0	0.0	0.0	
40	1424.0	0.0	0.0	2400.0	0.0	0.0	2600.0	0.0	0.0	
OASPL		85.1	50.5		111.6	90.8		114.9	95.4	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 ( PITCH ANGLE: 19.9 DEG )

DATA-POINT / RUN										
BN-4 / 54				BN-5 / 53				BN-6 / 51		
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	70.0	104.2	78.0	80.0	109.9	87.4	90.0	108.2	89.1	
2	140.0	102.2	86.1	160.0	107.2	93.8	180.0	111.4	100.5	
3	210.0	97.8	86.9	240.0	106.5	97.9	270.0	111.2	102.6	
4	280.0	94.0	85.4	320.0	102.8	96.2	360.0	111.2	106.4	
5	350.0	88.2	81.6	400.0	102.5	97.7	450.0	110.6	107.4	
6	420.0	85.7	80.9	480.0	99.1	95.9	540.0	110.5	107.3	
7	490.0	82.2	79.0	560.0	96.9	93.7	630.0	109.9	108.0	
8	560.0	76.3	73.1	640.0	94.2	92.3	720.0	109.0	108.2	
9	630.0	70.7	68.8	720.0	92.7	91.9	810.0	108.1	107.3	
10	700.0	0.0	0.0	800.0	89.0	88.2	900.0	106.3	106.3	
11	770.0	0.0	0.0	880.0	86.8	86.0	990.0	105.8	105.8	
12	840.0	0.0	0.0	960.0	83.7	83.7	1080.0	104.5	104.5	
13	910.0	0.0	0.0	1040.0	80.8	80.8	1170.0	102.8	103.4	
14	980.0	0.0	0.0	1120.0	78.5	78.5	1260.0	101.9	102.5	
15	1050.0	0.0	0.0	1200.0	75.2	75.8	1350.0	100.5	101.1	
16	1120.0	0.0	0.0	1280.0	73.7	74.3	1440.0	98.5	99.5	
17	1190.0	0.0	0.0	1360.0	70.0	70.6	1530.0	97.2	98.2	
18	1260.0	0.0	0.0	1440.0	67.0	68.0	1620.0	95.9	96.9	
19	1330.0	0.0	0.0	1520.0	63.9	64.9	1710.0	93.5	94.5	
20	1400.0	0.0	0.0	1600.0	0.0	0.0	1800.0	92.7	93.9	
21	1470.0	0.0	0.0	1680.0	0.0	0.0	1890.0	92.1	93.3	
22	1540.0	0.0	0.0	1760.0	0.0	0.0	1980.0	89.5	90.7	
23	1610.0	0.0	0.0	1840.0	0.0	0.0	2070.0	89.2	90.4	
24	1680.0	0.0	0.0	1920.0	0.0	0.0	2160.0	86.6	87.8	
25	1750.0	0.0	0.0	2000.0	0.0	0.0	2250.0	85.1	86.4	
26	1820.0	0.0	0.0	2080.0	0.0	0.0	2340.0	84.3	85.6	
27	1890.0	0.0	0.0	2160.0	0.0	0.0	2430.0	83.0	84.3	
28	1960.0	0.0	0.0	2240.0	0.0	0.0	2520.0	81.1	82.4	
29	2030.0	0.0	0.0	2320.0	0.0	0.0	2610.0	80.7	82.0	
30	2100.0	0.0	0.0	2400.0	0.0	0.0	2700.0	79.3	80.6	
31	2170.0	0.0	0.0	2480.0	0.0	0.0	2790.0	77.2	78.5	
32	2240.0	0.0	0.0	2560.0	0.0	0.0	2880.0	78.4	79.6	
33	2310.0	0.0	0.0	2640.0	0.0	0.0	2970.0	74.8	76.0	
34	2380.0	0.0	0.0	2720.0	0.0	0.0	3060.0	75.6	76.8	
35	2450.0	0.0	0.0	2800.0	0.0	0.0	3150.0	74.1	75.3	
36	2520.0	0.0	0.0	2880.0	0.0	0.0	3240.0	73.3	74.5	
37	2590.0	0.0	0.0	2960.0	0.0	0.0	3330.0	71.3	72.5	
38	2660.0	0.0	0.0	3040.0	0.0	0.0	3420.0	70.8	72.0	
39	2730.0	0.0	0.0	3120.0	0.0	0.0	3510.0	69.4	70.6	
40	2800.0	0.0	0.0	3200.0	0.0	0.0	3600.0	65.3	66.3	
OASPL		107.2	92.3		114.0	104.8		120.5	117.5	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

# DNW PROPELLER NOISE TEST

MICROPHONE: MP 8 ( PITCH ANGLE: 23.7 DEG )

DATA-POINT / RUN										
CN-3 / 101				CN-4 / 100			CN-5 / 98			
HN	F	SPL	SPLA	F	SPL	SPLA	F	SPL	SPLA	
1	60.0	103.9	77.7	70.0	108.6	82.4	80.0	111.9	89.4	
2	120.0	97.4	81.3	140.0	106.4	90.3	160.0	109.1	95.7	
3	180.0	87.8	76.9	210.0	101.9	91.0	240.0	108.2	99.6	
4	240.0	83.3	75.2	280.0	96.6	88.0	320.0	104.7	98.1	
5	300.0	71.6	65.0	350.0	90.8	84.2	400.0	103.9	99.1	
6	360.0	0.0	0.0	420.0	89.1	84.3	480.0	101.5	98.3	
7	420.0	0.0	0.0	490.0	84.8	81.6	560.0	98.5	95.3	
8	480.0	0.0	0.0	560.0	79.4	76.2	640.0	95.2	93.3	
9	540.0	0.0	0.0	630.0	73.3	71.4	720.0	95.1	94.3	
10	600.0	0.0	0.0	700.0	70.3	68.4	800.0	90.8	90.0	
11	660.0	0.0	0.0	770.0	66.3	65.5	880.0	88.6	87.8	
12	720.0	0.0	0.0	840.0	62.1	61.3	960.0	87.0	87.0	
13	780.0	0.0	0.0	910.0	61.3	61.3	1040.0	82.1	82.1	
14	840.0	0.0	0.0	980.0	0.0	0.0	1120.0	81.1	81.1	
15	900.0	0.0	0.0	1050.0	0.0	0.0	1200.0	78.3	78.9	
16	960.0	0.0	0.0	1120.0	0.0	0.0	1280.0	75.7	76.3	
17	1020.0	0.0	0.0	1190.0	0.0	0.0	1360.0	75.2	75.8	
18	1080.0	0.0	0.0	1260.0	0.0	0.0	1440.0	72.3	73.3	
19	1140.0	0.0	0.0	1330.0	0.0	0.0	1520.0	68.8	69.8	
20	1200.0	0.0	0.0	1400.0	0.0	0.0	1600.0	0.0	0.0	
21	1260.0	0.0	0.0	1470.0	0.0	0.0	1680.0	0.0	0.0	
22	1320.0	0.0	0.0	1540.0	0.0	0.0	1760.0	0.0	0.0	
23	1380.0	0.0	0.0	1610.0	0.0	0.0	1840.0	0.0	0.0	
24	1440.0	0.0	0.0	1680.0	0.0	0.0	1920.0	0.0	0.0	
25	1500.0	0.0	0.0	1750.0	0.0	0.0	2000.0	0.0	0.0	
26	1560.0	0.0	0.0	1820.0	0.0	0.0	2080.0	0.0	0.0	
27	1620.0	0.0	0.0	1890.0	0.0	0.0	2160.0	0.0	0.0	
28	1680.0	0.0	0.0	1960.0	0.0	0.0	2240.0	0.0	0.0	
29	1740.0	0.0	0.0	2030.0	0.0	0.0	2320.0	0.0	0.0	
30	1800.0	0.0	0.0	2100.0	0.0	0.0	2400.0	0.0	0.0	
31	1860.0	0.0	0.0	2170.0	0.0	0.0	2480.0	0.0	0.0	
32	1920.0	0.0	0.0	2240.0	0.0	0.0	2560.0	0.0	0.0	
33	1980.0	0.0	0.0	2310.0	0.0	0.0	2640.0	0.0	0.0	
34	2040.0	0.0	0.0	2380.0	0.0	0.0	2720.0	0.0	0.0	
35	2100.0	0.0	0.0	2450.0	0.0	0.0	2800.0	0.0	0.0	
36	2160.0	0.0	0.0	2520.0	0.0	0.0	2880.0	0.0	0.0	
37	2220.0	0.0	0.0	2590.0	0.0	0.0	2960.0	0.0	0.0	
38	2280.0	0.0	0.0	2660.0	0.0	0.0	3040.0	0.0	0.0	
39	2340.0	0.0	0.0	2730.0	0.0	0.0	3120.0	0.0	0.0	
40	2400.0	0.0	0.0	2800.0	0.0	0.0	3200.0	0.0	0.0	
OASPL		104.9	84.4		111.4	95.9		115.9	106.6	

F - FREQUENCY HZ

SPL - SOUND PRESSURE LEVEL DB RE 2E-5 PA

SPLA - A-WEIGHTED SOUND PRESSURE LEVEL DBA RE 2E-5 PA

## 7. Comments on Data Interpretation

In the preceeding chapters acoustic as-measured data are presented in terms of pressure-time histories and narrow-band spectra for all microphone positions MP 1 to MP 9\*.

As stated in the "Executive Report" to this Appendix all data have been analysed regardless of occasional microphone drop-outs or the occurrence of external pressure disturbances which may distort the propeller noise-signature completely.

To avoid erroneous data interpretation, the following list summarizes all those data-points (within the total test-program) which should be deleted with respect to the microphone position indicated:

### Microphone Position MP 3:

Delete analyses of Data Points   BC-4  
  BC-5.

### Microphone Position MP 6:

Subprogram	Delete analyses of Data Points
Basic Program	AN-1,2,3,4,5,7; BN-1,2,3,4,5,6,61,7 BC-1,2,3,4,5,6,61,7
Temperature Effect	HN-3;   IN-1,2,3;   JN-1,2,3; KN-1,2 HC-1,2; IC-1,2,3;
Attitude Effect	-
Installation Effect	FNC-7,8,9,10,11,12

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\* MP 8 has only been analysed for data points within the "Attitude-effect" test-program.

In addition, noise data acquired at microphone position MP 7 should be interpreted with care for such data-points which combine low propeller rotational speeds with high tunnel flow-velocities. Respective data are often disturbed due to the effects of microphone vibration. In each of these cases the respective averaged pressure-time history and the corresponding level-spectrum should be inspected carefully. If both data representations do not exhibit any periodic behaviour the respective analysis should not be interpreted.

On top of the averaged pressure-time history plot the number of averages as well as the magnitude of "disturbance-pressure-amplitudes" (which have been detected and deleted within the analysed time-interval) are indicated, the latter by  $\Delta P$ . In case of completely distorted propeller noise signatures,  $\Delta P$  generally assumes values of 496% (referenced to the minimum peak-to-peak pressure amplitude within the total number of propeller revolutions analysed). If even higher disturbance amplitudes occur, respective data analyses are marked by  $\Delta P > ***$  and should be deleted. Lists of harmonic levels in this case often contain just one level-value for the fundamental frequency ( $HN=1$ ) which then however has no physical meaning.

Therefore, data interpretation should not be solely based on the listing of harmonic levels. In particular, if only one harmonic level at  $HN=1$  is listed, a careful inspection of the respective level-spectrum (as calculated from the averaged time-history) is necessary to ensure the physical relevance of this harmonic level.